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*The American antiquarian
and oriental journal*







Walls of the City of Damascus



Streets in the City of Damascus

The American Antiquarian

—AND—

Oriental Journal.

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No. 1

THE SUNKEN WAR VESSELS IN LAKE ERIE

British war ships, sunk soon after Perry's great victory in Lake Erie, have been discovered and will be raised and taken to Detroit. Long supposed to have been destroyed by fire or powder by the vanquished British during their flight up the River Thames, these four vessels are the only ones that remain to tell of the great fight which saved Michigan, Illinois and parts of Indiana and Ohio to the United States. Had these vessels been victorious, many historians say that today the British flag would be flying over Chicago, Detroit and other great lake cities. So the old ships which have now been found, charred by fire and shattered by cannon balls received in battle, are not only of interest to Michigan persons, but to those of Chicago and Illinois as well. In fact, it has been suggested that one of the four vessels be sent to Chicago, one to Cleveland and the other two to Detroit. Thus would a city in each state of what was once the Northwest Territory have a memento of the days when the fate of that territory hung in the balance.

One of the four vessels discovered has already been raised, but the other three have not yet been brought to the surface. This ship is mainly constructed of logs. Had this not been the fact it is probable that she would not have stood the tremendous cannon fire which she evidently suffered. This vessel was heavily laden with munitions of war, which General Proctor was carrying from Detroit to his Indian allies, led by Tecumseh, up the Thames. Before being raised from the sand that had imbedded her during the course of a century thousands of pounds of cannon balls were taken out.

That these vessels were destroyed by the enemy somewhere between Detroit and the scene of the battle of the Thames has long been believed by historians, and most of them have agreed that the ships were burned to the water's edge and then blown up. The ships played their parts in one of the most interesting pages of American history. They helped to change the destinies of two great nations, for British historians, almost to a man, say that had Harrison been defeated at the Thames what was then the Northwest Territory would now be British territory.

After Perry's victory these four vessels fled to Detroit. Proctor knew there was no time to lose. Detroit could not stand against the now victorious fleet of the Americans. But

the great British general had a scheme whereby he not only planned to regain the lost city, but in which he believed he would utterly destroy the American power in the Northwest. Up the Thames was his powerful ally, Tecumseh. Proctor at once made up his mind to load the four war ships with munitions of war, flee up the Thames, and there, with a powerful army and a fleet at his command, he would fight the decisive battle of the war.

Perry's victorious ships were in hot pursuit, and as the fugitive vessels disappeared in the Thames the sails of the Americans appeared in the offing. Then came the pursuit, and then the battle, of which the finding of these ships proves historians know so little. Did the four British vessels turn on their enemies and fight, while Tecumseh and his warriors met Harrison on shore? Or one by one were the English ships sunk to keep them out of the hands of the enemy? These two questions will never be answered conclusively, though the evidences that surround the discovery of the ships seem to show that as Proctor was driven further and further up the river the ships were sent to the bottom.

The ships were not all sunk quickly and together. They went to the bottom one at a time, over a stretch of a mile or more. The fact that the vessels were not destroyed, and that they might be saved as almost priceless relics, was discovered by a boy swimmer, who in diving struck his head against a timber of one of the sunken vessels. Soon after this C. M. Burton, Detroit's well-known historian, took hold of the matter and made arrangements to search for the other ships. Divers found them without much trouble, although all of them were buried under the drift sand of a hundred years. One was found completely buried under the earth of what is now a promontory, but which a century ago was probably a sandbar. Over this vessel has grown a tree three feet in circumference.

The name of the vessel that has already been raised cannot be learned. She is about eighty feet in length, and could have carried from six to ten guns. Without a doubt the boat was one of the fastest sailers in the ill fated British fleet. Her bow piece is made of a solid oak log, and her other timbers are either rough hewn or still covered with bark. Before being sunk this ship evidently engaged in a hot contest, and after that, before being scuttled or sunk by cannon shot, was set on fire. That the Americans either came upon her before she sank or found her afterward is shown by the fact that no guns were found on the ancient war ship, seeming to show that the Americans recovered these, but left the cannon balls, probably with the intention of securing these later. The defeat of Proctor and Tecumseh by Harrison shortly after, however, made this unnecessary.

What will be found on the other old battle ships is now a

matter of much conjecture, in which all historians, both English and American, will be interested. It is not probable that all of the boats were stripped, and it is hoped that even valuable papers will be found among other priceless relics of the fleet. To whom these relics, together with the ships, belong is a question. Many Canadians are heartily opposing the efforts of Americans to obtain the old ships, saying it would be eternal dishonor to Britain and Canada to allow these relics of a great American victory to pass into American cities.

On the other hand, C. M. Burton and others who have the matter in hand are confident they have full rights to their discoveries, and are continuing their work of raising the ships. When the ships were sunk, they argue, the vessels, according to the rule of war, became American property. But it is probable there will not be an international quarrel over the matter, as the Canadian government does not seem disposed to take a hand in the question.

Many and romantic are the stories told of these historic ships by old inhabitants along the River Thames, to whom have come from fathers and grandfathers the stories of long ago. It is said that when these vessels appeared in the river Tecumseh and his warriors followed them along the shore, and that Saw-Log, Proctor's most powerful Indian ally next to Tecumseh, suggested that he and Tecumseh be taken aboard one of the ships. This, according to the old story, was done, and one night all the Indian chiefs held a war dance on one of the vessels. On one of the old ships, too, when danger was right behind, it is said, a marriage ceremony was held, in which a beautiful young American girl was wedded to one of Proctor's lieutenants, and that on the shore great fires burned and the Indians held high carnival, for to them the presence of the ships meant a great victory over the pursuing whites.

Many other stories are told of these ancient battle ships, and it is hoped that some of them will be cleared up by papers which possibly will be found soon.

THE LOST MAN

In 1806, Lewis and Clark returned from their trip across the American continent. They and their party were the first white men that ever crossed the continent, and had made the trip by ascending the Missouri to its sources, then crossing the Rocky mountains, and down the valley of the Columbia to the Pacific, and back by the same route.

At this time the Hudson Bay company and John Jacob Astor controlled the fur business of the North American continent, the company having its trading stations throughout the British possessions, and Astor principally throughout the United States and its Northwest territory. As soon as the result of the Lewis and Clark expedition was known, the energetic and far-seeing Astor decided, if it were feasible, to establish a line of trading posts to the Pacific, across the mountainous and desert regions which the explorers had traversed.

To ascertain whether this was practicable, he decided to send an expedition of his own across the continent. Charles Farnum, born in New Haven, Conn., a young man who was then a clerk in Astor's office and being familiar with the business considered especially competent to judge of the practicability of the proposed enterprise, undertook to head the expedition. It was agreed that Farnum should follow the route which had been taken by Lewis and Clark, and that Astor should immediately dispatch two sailing vessels which should go around Cape Horn and meet Farnum at the mouth of the Columbia river, so that Farnum and his party could return by vessel if it were deemed best so to do. Farnum was furnished with the necessary means to fit out an expedition, and leaving New York City, crossed the Alleghenies to Pittsburg; thence he proceeded by boat down the Ohio to its confluence with the Mississippi and up the latter to St. Louis. Here he fitted out his exploring party. He organized a band of seventy men, about equally composed of white men and half-breed Indians, and in canoes they started up the Missouri. Slow indeed was the progress of this daring band.

They left St. Louis in the middle of the summer of 1807 and were overtaken by winter when they had reached the upper waters of the Missouri. They camped for the winter at a point where a large river, flowing from the north empties into the Missouri. From the description given, I believe this must be the Milk river, which comes down from the British possessions and empties into the Missouri in Montana. And right here I will state that ever since I heard this story I have read with avidity every writing I have met with treating of the territory traversed by Farnum, and when I have found anything therein described which fitted the descriptions given by Farnum and Davenport have

assumed that it was what Farnum had reference to. It is well known that the Missouri was designated by the Indians as the "Big-Muddy," because of its brownish, soil-laden waters. Farnum said that the place where they spent the winter of 1807-8 was at a point where a river from the north empties into the Missouri; that before reaching this point it was necessary for the party to go up streams emptying into the Missouri to obtain water fit to drink; that above the junction of these streams the water of the river coming from the north was muddy, but that of the Missouri was clear. And this not only to my mind locates the place, but also proves the truth of Farnum's story, as he could only have had such knowledge from actual observation of a then wholly unknown region; and the man who communicated his story to me was too ignorant to have acquired his knowledge by reading.

But this daring band had met with many misfortunes. Lewis and Clark had had many battles with the Indians and had stirred up among them much rancor, which was bound to fall upon those who should follow them. So when the spring of 1808 opened Farnum found that his band of seventy had dwindled to about thirty, most of those gone having been killed by the Indians. It was seriously debated whether they should not turn back, but it was decided that it was safer to proceed than to attempt to return through a territory infested with hostile savages with whom they had come into conflict so recently. Onward they pressed, every week losing some men. When the waters of the Columbia were reached the party consisted of only seven. And now they found the valley of the Columbia so full of hostile Indians that they were compelled to desert the canoes they had built and proceed on foot among the foothills and on the sides of the mountains, following the course of the river.

On a beautiful, sunshiny day in the latter part of October, 1808, three white men forced their way through the underbrush upon the hillside and came out and stood upon a cliff that overlooked the broad mouth of the Columbia river, then called the Oregon. They were the sole survivors of the seventy who had left St. Louis. Before them lay as beautiful a vision as nature had ever painted. The broad valley, the majestic river and the blue ocean beyond. For this goal they had striven through hardships seldom borne by men. And yet when they gazed below they beheld a sight which froze the blood in their veins. Out on the broad waters of the river, drifting rapidly with its current, were two sailing vessels; around them were innumerable canoes filled with savages, who were sending showers of arrows upon the vessels, whose occupants were replying with flintlock and howitzer. The shores of the river also were filled with countless savages.

Within an hour after the men on the cliff came upon this sight, the vessels had reached the mouth of the river and

hoisted their sails and in three hours more they had sunk below the horizon. Language cannot paint the feelings of these three men as they stood upon the cliff. There was no habitation of the white man nearer than on the waters of the lower Missouri.

Whatever might be their despair, yet think of the still more wonderful courage which made them undertake to retrace their way back to civilization.

The captains of the vessels had been instructed to wait at the mouth of the Columbia six months and had so done and would have waited longer except that the attack of the Indians not only rendered it unsafe for them, but also convinced them that it would be impossible for Farnum and his party to make their way down the valley of the river alive.

Farnum and his two companions, after waiting a couple of weeks to see if the vessels would return, started to go back by the route they had come. The middle of the next summer, that of 1809, found Charles Farnum all alone in a dugout canoe, paddling his way down the Missouri river, near its junction with the Milk river. What had occurred between the time the men had left the cliff overlooking the Pacific ocean and the time Farnum found himself alone is in doubt. Davenport told me that as a boy he had spent many days, even months, with Farnum, fishing and hunting in the day and at night before a camp fire or at his log house, before its door in summer and within in winter listening to the story of his experiences; that he had often compared notes with others who knew Farnum well; and that all agreed that Farnum never contradicted himself except as to what occurred during this period. He had sometimes said that his last two companions had been killed by accident; sometimes that they had been killed by Indians and sometimes that they had died of hunger. But he never referred to this part of his experience at all unless interrogated in regard to the same. This made Davenport believe that some terrible tragedy was connected with their end and that possibly Farnum had killed them and from the terrible descriptions he gave of the hunger they suffered, it had often suggested itself to his mind that Farnum might even have been guilty of cannibalism.

But to return to Farnum. Near the place where he had camped two winters before, he was at last captured by the Indians. But the savages who captured him had never seen a full-blooded white man and were not denizens of that region. They had come from a region far to the north at the time they found Farnum, and were upon the war path against the Indians of the locality where they captured him; and soon they retreated by the valley of the Milk river, taking him with them. Their home was, according to Farnum, 300 or 400 miles to the north, in a region drained by a river running from the mountains toward the East, which I assume to have been

the Saskatchewan. Here they kept him in captivity for four years, making him do the work of a drudge, along with the squaws. It was the custom of these Indians each year, to send a large party over the mountains to that part of the Pacific coast which is the southern portion of Alaska. Here a Russian fur company had established trading posts, at which the Indians sold their furs. In the fourth year of his captivity Farnum was allowed to accompany the trading expedition. Of course, he had long since learned the language. At the trading post Farnum begged the Russian trader to buy him of the Indians, but the trader, a quarter-breed Indian, refused, saying he had no right to make such a purchase, and would be held personally responsible for the goods he might give for him, and that the price set on him by his captors was such that it would ruin the trader if the company should not approve the purchase.

Farnum wrote a letter to Astor, telling him the situation, and obtained a promise from the trader to forward it with the furs which he purchased. Back with the Indians he was compelled to go, and for three more weary years remained a slave. Then again he was allowed to accompany a trading expedition to the coast. In the meantime the letter had traveled from trading post to trading post up the coast of Alaska, across the Behring Strait, across the steppes of Siberia, and across Northern Russia to St. Petersburg, and thence by ship to New York. Immediately upon its receipt Astor sent word to the Russian fur company to direct their trader, if possible, to find the man who wrote the letter, and purchase him at whatever price. This word had reached the trader, and so he bought Farnum from the Indians. Farnum then traveled the same route his letter had taken, and within one week of just ten years after he left the office of John Jacob Astor, in New York City, he again walked into it. Of course, he was cordially received, and after he told his story, Astor said: "What has happened to you is the natural result of what I employed you to do. You have, therefore, been all this time in my employ, and I owe you ten years' salary, which I will now pay you. Go to your home and take a good rest, and if you see fit to return to me I will always give you employment."

After a few months' rest Farnum returned to the employ of Astor, but he had become wholly unfitted for life in a civilized community. Except in the very coldest weather he would sleep out of doors, on the roof in a blanket. The very fact that there were walls around him seemed, as he said, to stifle him. And otherwise he was wholly unfitted for his surroundings. Again and again he begged Astor to send him on some expedition, but was refused. But the next spring he could stand it no longer and left Astor's employ. He had that ten years' salary and decided to go into the fur trading

on his own account. He went along to Lake Champlain, and thence alone in a canoe to the St. Lawrence river; up that river through the Thousand Islands and through Lake Ontario, from Lake Ontario to Lake Erie, around Niagara Falls he carried his canoe, and then paddled the length of that lake and up the Detroit river to Detroit. Here he employed five men, Canadian half-breed Indians, to accompany him on his expedition. The party now proceeded through Lake St. Clair and the river of that name, into Lake Huron; along the shores of that lake and through the straits of Mackinac into Lake Michigan; along the shore of that lake and up Green bay and the Fox river as far as it was navigable. Here they carried their canoes across the portage to the Wisconsin river, and proceeded down that river and then the Mississippi to St. Louis.

And now, much to his chagrin, he discovered that Astor had made some kind of a contract with the United States government that gave him the exclusive right to establish trading posts in the territory West of the Mississippi river. It was of such a nature that it forbade the carrying out of Farnum's plans; so he paid off his men and discharged them. But return to civilization he could not and would not. He went back up the Mississippi, and, selecting a spot on its banks, located in Rock Island county, bought land of the United States government and built himself a log cabin, and here he passed the remainder of his life hunting and fishing.

Yearly he would descend the river to St. Louis to dispose of his furs. When at St. Louis he was in the habit of stopping at a tavern, popular with the trappers of the surrounding country, kept by a woman named Marie Le Bon, who in descent was part Louisiana French and part Indian. Her daughter Farnum married and took to his home. They had one son, who was named after his father. This son survived his father and mother, and when he followed them, his maternal grandmother, Marie Le Bon, was his only known heir, and that fact explains the deed from her in the chain of title.

FROM JAFFA TO JERUSALEM

You see nothing of Jerusalem till you get inside the city, and to enjoy a visit requires a greater enthusiasm than any to which I can lay claim. We were safely landed at Jaffa, which by this time ought to have a more decent landing-place, thence after a glance at the house where Simon the Tanner carried on business, I made my way—along tortuous roads, more or less blocked with stones and rubbish, and more or less exposed to a burning sun—to the station, whence we were to start for Jerusalem, a hot ride of nearly four hours in railway carriages of very second-rate quality. The land about

Jaffa is fertile and well cultivated, fig trees and olive trees and orange groves are abundant, and at Jaffa the chief business seemed to be packing them in boxes for export. At one particular spot our conductor told us that it was there that Samson set the cornfields of the Philistines on fire. Certainly the ground seemed dry and baked up enough. Then Arimathea ground seemed dry and baked up enough. Then Arimathea was reached. On our way we got our first sight of a native village, built of mud huts, into which it seemed difficult to find an entrance. A Kaffir village is infinitely to be preferred. The scene of desolation was complete. On the strong rocks nothing was to be seen but flocks of goats. A little fairer scene opened on us as we passed the neat German colony that has settled down here, almost under the shadow of the walls of Jerusalem. Then the terminus is gained; and we are whirled in a cloud of dust, in rickety carriages, driven by their hoarsely shouting drivers at full gallop, all of us white as millers, being clothed with dust. I wash at Howard's Hotel, swallow a cup of tea, and as we do not dine till six, make my way into Jerusalem by the Jaffa Gate. A little of Jerusalem goes a long way. It is dark and stifling, swarming with people, and camels and asses, and noisy beyond description. A sort of Rag Fair, only with a few touches of the East, such as a veiled woman, or a stately Turk in turban and flowing robes, or a black-coated, black-bearded Greek priest, or a low row of shop-keepers, sitting patiently in their dark and tiny shops, thrown in. You must keep moving, or you will be run over by a donkey or a camel, for as the country round Jerusalem grows nothing, the necessaries of life have all to be brought from a distance. My respected countrymen and countrywomen are in a state of gush all the while. I own I see very little to gush about. I reach the Via Dolorosa, I pass the Church of the Sepulchre and the Mosque which marks the site where Solomon built his temple. I think of the Royal Psalmist who here poured forth the wailings of his heart in language which has formed the penitential chant of all the ages. But if I would see the Christ I must get out of this city, all crammed with lies, and living upon lies. I muse by myself in the Garden of Gethsemane; I climb the Mount of Olives. It is outside the city, away from its old and new churches that I see the living Christ. I have had enough of Jerusalem. My fellow-travellers leave me to go to Jericho. I have no wish to be sent to Jericho, and prefer to remain under the grateful shelter of my hotel, just outside the Jaffa Gate. What strikes me most is the prosperity of the place. It is growing fast, in spite of Turkish rule. The people are robbed by the tax-collectors; nevertheless, the place gains, and the population outside the city walls is quite as great as that within. One reason, of course, is that wealthy Christians in England and America spend large sums of money in keeping up proselyting establishments here, and in erecting fine

buildings for the same end. Of course we have a bishop here, but he is High Church, and seems, from all I hear, more inclined to bridge over the gulf between his Church and the Greek, than to promote general and undenominational Christian work. The number of poor Jews is enormous. They come here from all parts of the world to die in the Sacred City, and have many charities established on their behalf. The Britisher has this advantage—that he pays no taxes. The Jew is not permitted to hold a bit of land unless he has been a resident here five years. The Turk holds Jerusalem to be a sacred city only second to Mecca. No wonder, then, that the nations have fought bitterly for the possession of its so-called sacred shrines; no wonder that the Christian from all parts of the world hastens to Jerusalem, and that you meet in the streets and shops and hotels such a mixture of men and women—brought by excursion parties from London—such as, perhaps, you have never seen before, and, perchance, may wish never to see again. I suppose it has ever been so. Those old Crusaders must have been rather a mixed lot. As it is, the Russian Church seems most in evidence. It has spent apparently a great deal of money in building purposes. Its new church, half-way up the Mount of Olives, is one of the finest buildings to be seen outside the walls. The Russian is wily; he knows what he is about—at any rate, better than many of his rivals in the race for empire.

All day long the hubbub of the city is bewildering, but in the night it is as quiet as the grave—no light is to be seen, no voice is to be heard; and what, after all, do you see?—endless rows of donkeys and donkey lads, ever coming and going, patient, long-suffering and heavily laden. There has been no rain for six months, and the Jews in the synagogue are praying for it daily, and yet it seems as far off as ever. One thing that is really enjoyable is the cool splendour of these cloudless skies by night. I have seen the moon rise in many lands, but never—no, not even under the Southern Cross—a moon so full, so fair, so bright as that of Judæa, as it throws its silvery light over old walls and peasants' huts, on hill and dale—I may not say ancient ruins, for all is new outside Jerusalem, and as regards most of the city a similar remark may be made. The Jews preponderate everywhere, apparently poor and depressed. The real Turk, slick and well-robed, is an imposing figure, but the Dragomen—chiefly Greeks, or of the Greek Church—are active and intelligent, and very ready to use their English, of which, apparently, they have but an imperfect knowledge. The Jews speak the common dialect of the country but are taught Hebrew in the many schools established for their benefit. The food displayed in their cook-shops is, however, by no means tempting, and nowhere, not even at such an international hotel as that of Chevalier Howard, is the commissariat department very

strong. But we have clean, cool, delightful bedrooms. When one thinks of Palestine and the place it fills in the world's history it is hard to realize what a small extent of country it contains. Its length is but 360 miles and its breadth ranges from sixty to one hundred miles. On one side is the Mediterranean Sea and on the other the desert plain of Arabia. A mountain range runs through it from north to south. Its chief rivers are the Jordan, the Littany, the Abana and the Pharpar.

HEBREW ANTHROPOLOGY.

By Henry Proctor, M. V. I.

In the Book of Genesis there are two accounts of the Origin of Man. These have long been distinguished as the "Elohistic" and the "Jehovistic" accounts. The Elohistic narrative is without doubt the earliest, and is an epic of unsurpassed grandeur dealing with the first appearance of man on the earth, or as some think, with a rehabilitation and the formation of the present Kosmos (Gen. I to II, 3). The Jehovistic on the other hand is in every way much more circumscribed, and deals only with the origin of one race, that is, the Adamic or Caucasian race, and touches others only in an incidental way. All those nations whose genealogy is traced back to Adam are of the Caucasian Race, sometimes called the White Race, although among them there are entire populations whose skin is as black as that of the darkest negro, such as the Bishareen and other tribes inhabiting the African coasts of the Red Sea, and the Black Moors of Senegal. The Aryan Hindu also is sometimes of darker hue than the true Negro, and even the Jews vary from the Black Jews of the oasis of Waregla to those with light hair and blue eyes. So that all variations of color may be found within the limits of one race, but this fact throws no light at all on the origin of distinct races, which it is easy to prove have existed, side by side, from a vast antiquity. For various reasons we judge the Yellow Race to be the oldest. It is to this race that the Accadians belonged, of which we possess the oldest monuments, and judging from Accadian statues they were of decidedly Tartar or Mongolian features, short, thickset, with yellow skins and coarse hair, like the Chinese. These inhabited Shumir (Shinar) or Lower Mesopotamia, but in Upper Mesopotamia, where the land rises from the alluvial plain, up to the mountains of Kurdistan and Armenia, a Semitic element preponderates from an early period, and this went on increasing until the Turanian Accadians were completely displaced by the Semitic Assyrians. It

is these latter for whose origin the Book of Genesis accounts, and even mentions "Accad" a being under the sovereignty of Nimrod, but does not account for the origin of the Accadians, nor indeed for that of the Black, Brown and Red Races, although these distinctions of race are known to have existed thousands of years ago. The Negro, Turanian, Semite and Aryan all stand out as clearly distinguished in the paintings on Egyptian monuments as they do at the present day: for example the tomb of Sete I shows a pictorial representation of four races, arranged in groups of four men of each, viz.:

- (1) Nahsi or Negroes.
- (2) Hemu, light brown hue, blue eyes.
- (3) Tamahu, fair as Europeans.
- (4) Rut, the Egyptians, who claimed to be root of men.

But the Bible does make mention of several nations who were not apparently of Adamic descent. In the Sixth Chapter of Genesis, it states that "the Nephelim were in the earth in those days," and the Bible afterwards indicates the gigantic Anakim as descended from the Nephelim. Others of these prehistoric giant races were the Rephaim, the Emim, the Amalekites, the Zamzummim, and the Horites. Amalek is said to have been (Num. 24 : 30) "the first (reshith) of the nations." And the Horites who preceded the Edomites in their occupation of Mount Seir, were no doubt the excavators of the rock dwellings which are graphically described by Keith, as abounding in Petra, the ancient metropolis.

"The base of the cliff," he says, "is wrought out in all the symmetry and regularity of art, with colonnades and pedestals, and ranges of corridors adhering to the perpendicular surface, flights of steps chiselled out of the rock, grottos in great number, some excavated residences of large dimensions (in one of which is a single chamber sixty feet in length, and of proportionate breadth). The rocks are hollowed out into innumerable chambers, of different dimensions, whose entrances are variously, richly and often fantastically decorated with every imaginable order of architecture."

These were the dwellings of the troglodyte Horites which were afterwards occupied by the Edomites. From Genesis 14 : 5 we learn that the power of these prehistoric giant races was reduced by Chedorlaomer or Kudur-Lagamer, King of Elam, in alliance with the well-known Khammurabi (Amraphel) King of Shumir, Eri-akee (Arioch) and Tudghula (Tidal) which may account for their disappearance from the pages of history and the peaceable possession of Mount Seir by the Edomites: of Ar, the land of the Emim, by the Moabites, and the land of the Zazim by the Ammonites. All these were giant races, like the Anakim and Rephaim, who were descended from the prehistoric Nephilim (Gen. 6-4; Numbers 13 : 33 R. V.) Of the Rephaim we are told that the name of their capital was Ashteroth Karnaim, which

indicated that they were worshippers of the two-horned Ashteroth or Astarte, that is, moon worshippers, which is probably the oldest kind of worship known. We learn also of the Anakim, that their chief city was Hebron, which was called originally Kirjath-Arba, from Arba, the father of Anak, and that it was built seven years before Zoan in Egypt. Now Zoan was certainly at one time the capital of Egypt, because it gave its name to the whole country (Isaiah 19 : 11, 13) and this must have been before the reign of Menes, who removed his capital from "This" about 800 years before the time of Adam to Memphis. It would appear then that the first capital of Egypt was Zoan, which was built seven years after Kirjath-Arba or the city of Arba. This would carry back the rise of the Anakim to an enormous antiquity and so of all the Nephilim, or primitive inhabitants of the earth.

An important archæological discovery has been made at a small place called Danesdale, near Driffield, East Yorkshire, by Canon Greenwall, of Durham, acting under the auspices of the East Riding Antiquarian Society. At Danesdale are a number of mounds, which for years have been popularly and locally known as "Danes' Graves." Further investigation has been made, with the result that Canon Greenwall has come to the conclusion that these graves, which are protected by a wood, are not Danes' graves at all but belong to an age at least a thousand years before the Conquest—that is, to about 2,000 years ago, and prior to the Roman invasion. In one of the tumuli laid bare were found not only the bones of an ancient Briton, but the iron tyre of his chariot, the iron bit and trappings of his horse, and a bronze pin, beautiful in design and enamelled. The pin is a specimen of early British enamelling, and of a type quite peculiar to the iron period. It has a peculiar twist in the shank, which makes its origin certain. Two other similar graves have been opened at Arras and Beverley, in which chariots were found, and in the one at Arras the tyres and naves of the wheels were complete. The tyres were iron, but the naves bronze. There were also an iron mirror with bronze mountings, the end of a shank of a bronze whip, and two or three rings through which the reins of the chariot would be carried.

THE USE OF METALS BY THE EGYPTIANS.

Professor R. D. George contributes to the December *Popular Science Monthly* an article entitled "Mining and Use of Metals by the Ancient Egyptians," in which he shows that the ancient Egyptians knew, and used, gold, copper, silver, iron, lead and tin, and the alloys, bronze, brass, electron and solder. The fact that brass was used has led some Egyptologists to believe that zinc was known, but the unalloyed metal has not been found, nor do the inscriptions contain any reference to it. The majority of writers, therefore, hold that the brass was produced by mixing some ore of zinc, possibly calamine, with copper ores in the smelting furnace. The oxide of manganese is supposed to have been an article of commerce between the Bedouins of the Sinai peninsula and the ancient Egyptians.

"Nub," the Egyptian word for gold, is found in the oldest inscriptions, and at Beni-Hassan a series of pictures dating back to the twelfth dynasty, 2130-1930 B. C., illustrated the whole process of making gold ornaments. Centuries before this, the Nubians had mined gold in the mountainous desert regions of the Nile and the Red Sea, and it has been suggested that the name Nubia is derived from the name of the metal. The Egyptian kings of the twelfth dynasty invaded Nubia and finally annexed that part of the territory containing the gold mines, and built and garrisoned a wall which should mark the boundary between the two peoples. The mines were vigorously operated by the new owners, and the quantity of gold in the land of the Pharaohs increased rapidly. At the opening of the New Empire, about 1530 B. C., the lavish use of this metal by the kings indicates the wonderful productiveness of the mines.

Within the last few years the ancient workings of many gold mines have been discovered in eastern and southern Egypt and in Nubia. The mining region of Egypt proper was the mountainous belt bordering the Red Sea from the Gulf of Suez to the southern part of the country, where it connected with the mining area of the Nubian desert farther inland, and with that of Nubia proper. The oldest charts or maps of any kind in existence are two papyri showing the topography of the country and the position of the workings, mills, mines, houses and other buildings connected with some of these ancient mines. One of these maps was made in the reign of Rameses II., the second king of the nineteenth dynasty, which began about 1320 B. C.

At certain periods in Egyptian history, as, for example, early in the new empire (2130 B. C.), copper seems to have been recognized as the standard of value, and accounts were recovered in *uten* of copper. These coins, if such they may be called, were made of very exact weight (about 91 grains), and were in the form of a spiral.

Bronze, the alloy of copper and tin, was the Egyptian's tool-

steel, his cast and wrought-iron—in short, all that iron and steel are to the American. Just when he discovered the effect of tin on copper there is no means of knowing, but certain it is that many centuries have passed since he came into the possession of the secret.

Iron never found wide favor in ancient Egypt, but there are abundant evidences that it was used side by side with bronze for tools of various kinds. There is no reason to believe that it was ever used commonly for decorative purposes, either in architecture or otherwise. The finding of iron bracelets proves that it was occasionally used for personal adornment. Even its use for tools seems to have been much more limited than that of bronze.

In early times silver was the rarer and more precious of the metals in Egypt. This is probably due to the fact that it was not produced in Egypt or the neighboring countries. In later times when commerce developed and the products of all the earth began to come to the ports of the Nile and the Red Sea, the two metals changed places in respect to value, silver became more precious than gold. The greater rarity of silver in the earlier dynasties is shown by its very limited use, as well as by the fact that in the old inscriptions it always stands before gold. Gold was lavished on the mummies and on the tomb decorations of the wealthy, but silver was seldom used in this way. King Rameses III. records the fact that during his reign of thirty-one years he gave to the temple, among other gifts: 1,015 kg. of gold, 2,994 kg. of silver, 940 kg. of black bronze and 13,060 kg. of bronze.

Electron, Egyptian "usm," was an alloy of silver, gold and usually copper in small amount. The proportions were about 150 silver, 100 gold and 5 copper. In the restoration of the temple of Ptah, in the twenty-fifth dynasty, the doors were made of electron.

Of the metals known to the Egyptians lead seems to have been the least used. Very few, if any, leaden objects have been found, and the only ways in which the metal is known to have been used are in the making of solder and in glazing pottery.

Oriental Studies, by Lewis Dayton Burdick, is the title of a volume of 150 pages. The contents are: "Antiquities of Our Ethical Ideals," "Some Variants of the Tale of the Kings," "Notes on Faiths and Folk-Lore of the Moon," and "Epics before the Iliad."

In the first article, the author, after showing that modern critical scholarship has carried the authorship of the books of the Pentateuch forward some eight centuries, to a period subsequent to the Babylonian captivity; when, by the hand of some later author or editor, they are believed to have received their final shaping as they are known to us, he proceeds to show that the ethical precepts of later times, as well as all so-called

divinely revealed moral laws, have not been peculiar to any period or nation, but that their growth and development have been coextensive with the evolution of nations, and that they may be traced in all the civilizations of the past.

The second paper shows that there is a spontaneous generation of similar ideas and impressions under like conditions among different races and nations at parallel levels of culture and development. He then shows the similarity in the histories of Kha-m-uas, eldest son of Rameses II., Moses, Buddha, Sargon, Romulus, and others.

The "Epics before the Iliad" treat of the Epic of Gilgamesh, the Chaldean Epic of the Deluge, and the Epic of Pentaur, which commemorates the victory of Rameses the Great over the allied forces of the Khita at the battle of Kadesh.

The Notes on Faiths and Folk-Lore of the Moon, we shall refer to again. (Oxford, N. Y. The Irving Company. Price one dollar. Postpaid.)

The latest development of the educational awakening in England is the proposal to establish an Oriental school in London. In four of the universities instruction in the Indian vernacular is given to candidates for the civil service, but no provision is made to meet the needs of the merchant, the barrister, the physician or the engineer going out to the East. The case is very different in Germany, France and Russia. In Berlin the Orientalischer Seminar, with an annual grant of \$40,000, has the necessary buildings, a fine library, an admirably conducted journal and 228 regular and special students. The Ecole Spéciale des Langues Orientales Vivantes in Paris has an income nearly as great, publishes a journal and a series of textbooks, and has a well selected library. But Oriental study is most fostered in St. Petersburg, being the fourth faculty at the University, with twenty-seven professors and teachers of Eastern languages. An auxiliary college has been established at Vladivostok. The failure in Great Britain to meet the demands of its own empire is shown in the fact that out of the 150 ancient and modern languages of India, there are professed teachers of only nine in the universities.

THE HISTORY OF THE ANTEDILUVIAN WORLD.

BY STEPHEN D. PEET.

The history of the antediluvian world naturally leads us to a comparison of the early parts of the Bible with the various myths of the Pagans; a comparison which is certainly very suggestive. We are to remember that the Bible was written at a later date than most of the systems of mythology. This of itself makes it important that we should compare the two. In doing this we may well take the events as they are recorded in the Book of Genesis, and see how they correspond with the Pagan myths. Many of these are found in the books of Homer, and so are well known; others are recorded in the Egyptian Book of the Dead, and are becoming familiar to the scholars. Other myths and legends have recently been brought to light by the explorations in Babylonia, and the translation of the cuneiform tablets which have been exhumed have made these familiar to many. These all take us back to a very early age in history, and show to us that there are many sources from which we may draw, while making up our minds as to the early beliefs of mankind. These are very important, for they make us familiar with a period, which antedated the days of Noah, and in reality furnish a framework which is very suggestive of the state of thought and belief in those early times. We know that the frame is not the picture, but it may help us to appreciate it and realize its real value. We are not expected to study the frame as we would the picture, but should welcome anything that will serve to set the picture in the right light.

I. We shall begin with the Bible story which describes the events which followed the Fall, and the banishment of the first pair from the Garden of Eden. We read in Genesis that the first pair after their transgression, heard the voice of God walking in the garden in the cool of the day, and Adam and his wife hid themselves from the presence of God among the trees. Now every part of this passage is very significant, for it brings out the nature of God as a spiritual being, and at the same time shows the sense of guilt, which led the first pair to hide themselves from His presence.

The following is the passage: The Lord God called unto Adam and said, "where art thou," and he said, "I heard Thy voice in the garden and I was afraid, for I was naked, and I hid myself"; and the Lord God said, "Who told thee that thou wast naked? Hast thou eaten of the tree? whereof I commanded thee that thou should not eat." And the man said, "The woman whom Thou gavest to be with me, she gave me of the tree and I did eat." And the Lord God said unto the

woman, "What is this that thou hast done?" And the woman said, "The serpent did beguile me and I did eat." And the Lord said unto the serpent, "Because thou hast done this thou art cursed above all cattle, and every beast of the field, and upon thy belly shalt thou go all the days of thy life."

Let us analyze the different parts of the story. "The voice": this is certainly a remarkable expression, and one which has within it a whole realm of truth. There is nothing like it in literature, either ancient or modern. The language is full of majesty and power, and suggests calmness and kindness; such kindness as we expect from our Heavenly Father. The Bible in this respect presents a great contrast to that which is presented by Pagan mythology. In fact, this is true of every view of God which is contained in the inspired word, and it



Fig. 1.—MARDUK AND TIAMAT.

only needs a little study of the Bible in connection with mythology to realize the difference between the Bible view of the personality of God and that which is given in the mythology of all nations.

In Genesis the personality of God is indicated by the fact that there is a voice which was heard, but it was a voice full of gentleness and love, and yet was firm in rebuking the disobedience of the first pair. Nothing is said of the particular form which he bore, though the natural conclusion is, it was the human form, but that kind of a human form which Christ is supposed to have had after his resurrection, a form which was so strange, that neither Mary nor the disciples recognized him at first. God is not represented as remaining in the garden, or appearing again to the first pair, though the patriarchs afterward had visions of him, which were very remarkable. It is said that an angel appeared to Abraham in front of his tent

and made the promise to him that his seed should be as the stars in multitude. Jacob had a vision of a ladder on which angels were ascending and descending. Ezekiel, the prophet, had a vision in which the glory of the Lord appeared, and the house was filled with a cloud, and the court was filled with the brightness of the Lord's glory. There are other Theophanies which seem to present God as having a human form, and yet with a supernatural brightness. These have given to us an impression which we cannot dismiss, and yet we know that God is a spirit, and that those who worship him must worship him in spirit and in truth.

One thing further shows the great difference between the Bible and all Pagan views: There is nothing fabulous about the representation of God, he is a voice and a spirit taking upon himself the human form. The Bible elsewhere speaks of the voice of God thundering among the mountains, and we, ourselves, speak about the conscience, as the voice of God in the heart, and in all cases are led by the voice to a higher conception of the being of God. The Scripture elsewhere speaks of the still small voice.

In this we see the difference between the Bible view and the Pagan view of God. In Genesis God is described as one who walks calmly and serenely in the garden, but with great majesty. There is no anger in his words, no rage in his attitude, but great moral power is shown, and yet great kindness and gentleness. We get a view of divinity, which is not found in any of the ancient books, and seldom in modern books. On the other hand, the chief view of the divinity of the Babylonians is just such as one would expect from a Pagan nation. Marduk is represented as in fierce conflict with a monster, who is the embodiment of every passion and is made up of elements which represent the worst things in creation.

We are to notice the contrast between the different visions which are recorded in the various parts of the Scriptures and the picture of the chief divinity of the Babylonians, called Marduk. He is represented as clothed in peculiar garments made up of the feathers of birds, but with fringes below the feathers. There are two pairs of wings issuing from the shoulders; there is, also, a pair of horns issuing from the helmet above the head. One hand holds a sword; the other hand, which extends out in front, holds a trident, which symbolized the lightning. The whole figure has the form and attitude of a warrior who is full of courage and manly vigor, and is worthy of admiration, though it fails to represent the view which we should get of a heavenly father, and is in contrast to that which is given in the Bible by the single word, the voice of God.

Opposite to Marduk was Tiamat, the monster, His form is supposed to represent, or personify, the storms, as well as the evil things of nature. It is not a serpent but a ferocious ani-

mal; it has the wings of an eagle, the claws of a bird, the scales of a fish, the mouth and head of a tiger. He is in contest with Marduk, who is supposed to be the god of light.

We have thus the two pictures, which are in great contrast, one of which seems to have been given by the spirit of inspiration, for there is nothing about it which we cannot accept as true of the Supreme Being, but the other fails utterly to meet our idea of the true God. This hydra-like creature was but the demon of the deep, the hebdominal serpent, the evil one, the maker of darkness, the enemy of the gods. The association was not only with magic but with death.

There are in the Babylonian records distinct traces of the Story of the Serpent, but opposite to this, is the view of

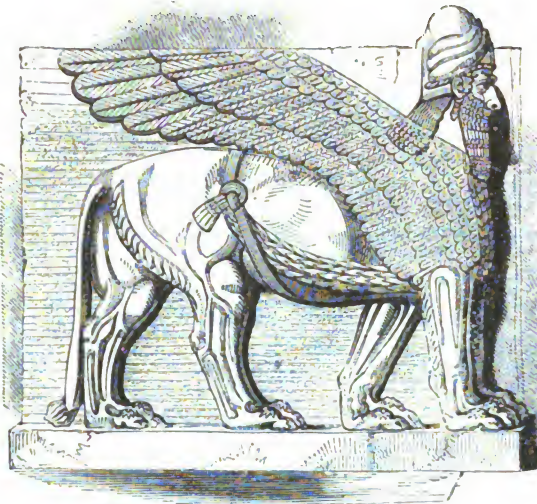


Fig. 2.—WINGED LION.

Merodach, who was a conqueror and the god of light, and who may well represent the being who was the chief object of worship among all the Pagans. In this respect the Babylonian record confirms the Scripture story, though exaggeration is manifest in the one, while calmness and truthfulness characterizes the other.

There are, however, other creatures in the Bible narrative which are worthy of special attention, for they are superior to anything found in the Pagan myths. Let us take the curse that was placed upon the serpent, and compare this with the Pagan view. The word that was spoken by the voice to the serpent was as follows: "Thou shalt be cursed above all cattle, and above every beast of the field; upon thy belly shalt thou go, and dust shalt thou eat all the days of thy life; and I will put enmity between thee and the woman, between her seed and thy seed: it shall bruise thy head, and thou shalt bruise his heel." There are many descriptions contained in Pagan mythology which represent dragons and monsters in different forms. These are generally represented by a combination of the fiercest creatures upon the face of the earth. There are sometimes dragons with many heads, sometimes human beings with bodies and tails of serpents. In fact Pagan mythology is full of such

monsters. But there is no view of God that can compare for a moment with that which is given us in the Book of Genesis.

It is true that God pronounced a judgment upon man and the woman, and a curse upon the serpent in the midst of the garden. The sentence pronounced upon the woman was: "In sorrow shalt thou bring forth children, and thy desire shall be to thy husband and he shall rule over thee." A calamity fell upon the man: "Cursed is the ground for thy sake, in sorrow shalt thou eat of it all the days of thy life. In the sweat of thy face shalt thou eat bread until thou return to the ground." The first pair were then banished from the Garden of Eden, and were not permitted to partake of the Tree of Life. The cherubim were placed at the east of the garden and a flaming sword turned every way, to keep the way of the Tree of Life. Certain events followed which are recorded as matters of the earliest history.

II. This leads us to a study of the cherubim. The question is: What was the form of the cherubim and what did they represent? There are many allusions to the cherubim in other parts of the Bible. In Isaiah, in Ezekiel, and in the Psalms are descriptions of the cherubim, and with them an interpretation. In Ezekiel it is said: "The Glory of the Lord went up from the cherubim and the house was filled with a cloud, and the court was filled with the Glory of the Lord's brightness, and the sound of the cherubims' wings was heard even to the outer court, as the voice of the Almighty God when he speaketh, and there appeared in the cherubim the form of a man's hand under their wings, and the Glory of the God of Israel was over them; and the cherubim lifted up their wings and mounted up from the earth in my sight."

In the Book of Revelations there is a description of the angels which guarded the throne of God and the voice of the angels about the throne. Were the cherubim which guarded the

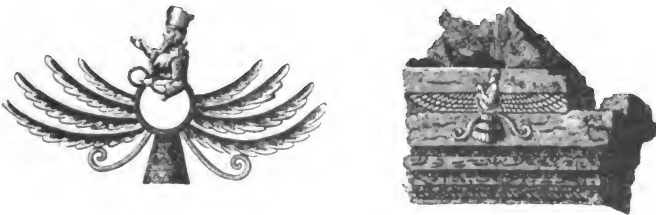


Fig. 3.—PRIEST KINGS AND PAGAN DIVINITIES.

Tree of Life the same as the angels in Revelation, or were they the same as the images which were in common use among the Pagans? There were sphinxes which guarded the approach to the pyramids in Egypt. There were also composite images which guarded the palaces in Babylonia. Were the cherubim

the same as these, or were they clouds which were full of lightnings, and seemed like beings with swords in their hands which turned every way?

There are pictures of Zeus in which he is surrounded by a circle, which may have been a symbol of the cloud. He holds a bow in his hand, and seems to be floating in the air. There are also figures which were very common in the palaces of Babylon; others are common in the bas-reliefs of the Persians. These represent human images with several pairs of wings issuing from their shoulders, with a peculiar headdress above the head. The human headed bulls which were exhumed by Layard from the depths of the mound at Hissarlik, are supposed to represent the cherubim. These were the symbols of kingly power, and were placed at the very entrance to the palaces. They were supposed to represent personal attributes; the wings symbolized swiftness; the legs, strength; the body, courage; the face, intelligence; the horns that projected above the head, kingly power. Their position at the head of the staircase and in front of the palaces was calculated to impress everyone with the supremacy of the king who dwelt in the palace. A supremacy which extended over sea and land, over man and beast, and even to the skies. (See Fig. 2)

There were many winged figures among all the cities of the East, which may have represented clouds or the supremacy of the sky, but these composite creatures were more suggestive of power. There were also ornaments in the palaces of Nimrod, which represented bulls with expanded wings kneeling before the mystic flower. Sometimes the human figure takes the place of the bull, and the simple flower becomes a tree with flowers at the end of the branches. See Fig. 8

In fact, all the ornaments and art forms which were to be seen in the palaces of the East, were symbols which remind us of the cherubim and the Tree of Life. The language which is contained in them is not understood by all, but is worthy of study. We are brought face to face with the figures which guarded the approach to the Tree of Life.

Whenever we look at the ornaments so common in the ancient cities of the East, we are reminded of the difference between heathen symbolism and the Book of Revelation. They are symbols of human grandeur combined with the Nature powers; but the Voice that walked in the garden at the cool of the day was a symbol of the Divine presence.

There are other symbols which confront those who travel in the lands of the East, which are very expressive. Among these are the winged circles over the massive gateways of Egypt; the pillar, with the lions on either side, which was placed over the gateways in Greece; the dragon which is seen on the roofs of the Chinese temples; the tree, or pillar, which is so often met with by those who are exploring in the Island of Cyprus, all of these are modifications of the

cherubim, or of the tree, which symbolize the power and presence of God in the Garden of Eden.

There are symbols in America which also contain the objects of terror, and which in some respects resemble those which were common among the Pagan nations. There are many symbols of the Nature powers among the heathen nations of the earth, both ancient and modern, but no one would take the creatures which are so common in all lands, including China and America, as containing the same meaning or representing the Bible truths.

There was an element of terror in the ornaments of most of the Pagan nations of the East, the only exception is that of the Greeks. This element was very strong among the ancient inhabitants of Mexico and Central America. The serpent was used to convey fear. To illustrate: the body of the serpent which formed the balustrade of the steps which led up to the temple at Chichen-Itza. The serpent has an open mouth, a protruding tongue, a glaring eye, and scales upon the head. This was the fabled feather-headed serpent, which symbolized the rain cloud, and at the same time sym-

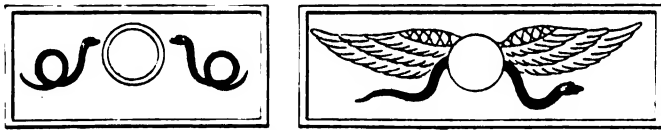


Fig. 4.—WINGED CIRCLES AND SERPENT SYMBOLS.

bolized the lightning which issued from the clouds. There were other symbols which represented the Manitou faces. These were generally placed over the shrines or temples; but the face of this Manitou was often placed above a series of bars which had serpents' heads at the end, the bars being placed upon the façade of the temple. The top was guarded by pillars which represented the same serpent. There was a shrine in the court of the temple in the City of Mexico which was built in the form of a great serpent, with mouth wide open, showing fangs, and within the shrine fire; so that the Spaniards thought they had entered the gate of hell. The fair god was clothed in white, while the ordinary garb of the Mexican priest was black. The enemy of the fair god was the god of death, and he resembled Loki, the evil one of the Scandinavians; while the fair god can be compared to Baldur.

These show the contrast between Paganism as it existed in this country, and the religions which came to it from the lands of the East, the starting point being the Garden of Eden. The perversion of the truth which comes from the worship of the Nature powers has arisen upon every side, and seems to have culminated in prehistoric America. The feather-headed serpent was the god of the wind, and represented the thunder

storm, and had the varying names of Cuculcan, Hurakan, Gucumatz, and Votan. From this circumstance we should judge that there was even among the heathen a double conception; One of which represented innocence, and the other guilt; one life, the other death. But if we go back to the Garden of Eden, we find the Tree of Life was a symbol of the Divine presence from the very beginning. Still the cherubim had a double meaning. It was like the rain cloud, which is a source of great blessing, but may hold the lightning which is liable to strike anywhere.

According to Pagan mythology there were two supernatural beings who claimed the supremacy; one which seemed to be good, and the other was a monster of evil. These two are represented not only by words but by pictographs which personify the powers of nature, which seem to have been in contest.

The story of Creation brings this contrast out, a story which has been given by Berosus, the Priest of Bel. It is as follows: "There was a time when nothing existed but darkness and water, wherein resided most hideous beings which were produced of a two-fold principle. For men were begotten with two wings. Some, moreover, with four wings and two faces, and having one body but two heads. The one, that of a man; the other, that of a woman; each being in their several organs both male and female."

These contrasts are very common in Pagan mythology, for the tree that bore the golden apple was guarded by the dog



Fig. 5.—SYMBOL OF ROYALTY.

Cerberus. There were also other monsters, such as serpents and dragons; but, on the other hand, there were many nymphs which represented the friendly Nature powers. These

varied according to the elements represented. The water nymph lived among the rivers, brooks and springs; the wood nymph presided over the forest; the sea nymph, over the ocean. They were called oceanides and nereids. Some of the nymphs were represented with a beautiful head of a female, but the body terminated in two snake tails (see Fig. 7).

III. We come now to the first death. This, according to the Scriptures, occurred immediately after the fall and banishment from Eden. The story is interesting, and reminds us of the stories which were common among the nations of the East. To illustrate: The story of the two brothers, Romulus and Remus, who were the founders of the city of Rome, reminds us of the two brothers who brought their offerings to the Lord, though Romulus seemed to have been honored as the great founder of Rome, while Cain was dishonored and bore a mark on his brow.

The offerings in the Bible story corresponded to the employments of the two brothers. Abel was a shepherd and offered from his flocks, and his sacrifice was accepted; but Cain brought an offering of fruit and it was rejected. It is not stated that Abel offered a sacrifice, for there is no mention of the blood, as atonement for sin. It was as simple an offering as that of Cain. It is difficult to account for the acceptance of Abel's offering and the rejection of Cain's. But the conclusion shows that a different spirit was manifested, for Cain was angry and killed his brother; Abel was innocent and suffered death at the hands of his brother. The Bible does not state where the offerings were made, or whether there was an altar. Nothing is said about the use of fire. But Cain was driven out from the presence of the Lord, and a mark was set upon him, lest anyone finding him should kill him. There are, however, features in the narrative which are of interest to the ethnologist, for Cain represented the agriculturist, and Abel the shepherd.

Cain builded a city and called it after the name of his son Enoch. This is according to the natural progress of society.

The shepherds, who roam over vast territories, seldom build cities. The agriculturists till the soil, but they bring their products to the city. The walled cities and the fortified places are generally found among the agriculturists, though the shepherds do at times resort to them. The conclusion is that man at this time had passed out from the Stone Age, and had reached the beginning of the Iron Age. This is illus-

trated by the story of "Tubal Cain," who was an instructor of every artificer in brass and iron; while Jubal was the father of such as dwell in tents and handle the harp and organ.

The picture of primitive society brought before us by these two or three verses is very graphic and true to life. There is nothing in Pagan mythology which excels it. There



Fig. 6.—SHEPHERDS AND NAVIGATORS.

are myths among the Scandinavians which represent the two kinds of life, and two kinds of character, and two kinds of climate. Baldur represents Abel, who was innocent, for he suffered from the hand of Loki, who was an evil spirit. The event is one which affected the whole people. Though grief was felt over the death of Baldur, and Loki is abhorred as the spirit of evil, yet the weapon that was used by Loki was the mistletoe, which was the emblem of peace and the symbol of marriage. It would seem that the same chords of grief which were struck when Abel was slain near the Garden of Eden, found an echo amongst the inhabitants of the far North, showing that there are chords in the human heart which always vibrate when innocence suffers at the hands of the guilty.

There is another picture given in Genesis, which is worthy of attention. The descendants of Cain seemed to have increased, but polygamy appeared. Lamech had two wives: Adah and Zillah. Adah bore Jabel, the father of such as dwell in tents and have cattle. His brother Jubal was the father of all who handled the harp and organ. This chapter brings before us a state of society which exists in barbarous countries, which indicates savagery rather than civilization. We are reminded of the fact that society grew up in these days exactly as it has grown up everywhere in the world. Nothing in the Bible really contradicts the teachings of science, but, on the other hand, confirms the conclusions of all ethnologists. What we call savagery has always existed before barbarism, and barbarism before civilization, and music has always existed among the savages, and musical instruments have been found in all parts of the globe. Human nature is everywhere the same. Revelation and history are in accord. Archæology confirms the story of Genesis. Society does not begin with civilization and then decline into savagery, but the course is from the lower to the higher condition. Gladstone in his *Juventus Mundi* has described the mythology of the Greeks, and has shown that the Greeks themselves came up from a lower condition. The gods of the Greeks were very different from the God of the Bible, for they were the Nature powers personified and deified; while the God of the Bible, called Jehovah, was from the beginning a personal divinity and cannot be identified with any Nature power. According to Greek mythology Zeus was an air god, and dwelt upon the summit of Mount Olympus. Poseidon was the god of the sea; Hephaestus was the god of fire; Uranus was the god of the air. The elements were all represented, and there was no supreme being.

The moral character of the God of the Bible is the chief and most important element, and one which makes the book superior to all the Pagan writings, in whatever nation or whatever period they are found. We may go to the Phœnicians, the Egyptians, the Babylonians, the Accadians, the Hittites, or any other of the ancient nations, and we shall not find

among them any such high and holy being as is described in first chapter of Genesis. The unbelieving persons, who have given way to their prejudices and rail against the God of the Bible because of his cruelty or severity, will do well to compare the book with the representations of the gods of the heathen, and then ask the question: Why is it that civilization has always arisen where the Bible has been known and read?

Pagan mythology was associated with many of the evils which prevailed in the early ages; and while it has given to us many an interesting tale of mythology, yet there is nothing that has proved so elevating to the world as the pictures in the first chapter of Genesis, which constantly come before our eyes as we read the old book. There is not as much poetry in Genesis as in the books of Homer, but it is remarkable for one thing, that it represents God as reigning supreme over all creation, and is superior to all, and has none of the human passions or propensities, but abounds in purity and holiness. In this respect he presents a great contrast to all the Pagan divinities, and, in fact, to all the Nature powers, or even the elements of creation.

We do not deny the beauty of the Homeric mythology, nor would we reflect upon the Egyptian system of worship. But if we were to seek for the highest conception of God, we certainly would not go to any Pagan mythology for our morals. We have in Homer, divinities, all of whom appear to represent the Nature powers, but each of which was attended by a female deity. Persephone is the queen of the dark region; Diana was one of the daughters of Oceanus, who remains in the ocean. Zeus is crowned with the oak leaf and dwells upon the summit of Olympus. Apollo was the god who introduced the harp, and is the author of music. Poseidon was the god of the sea, but the rebellion of the giants shows the distinction between the under world and the upper world.

In reference to these gods of the Greeks, Cox, in his "Aryan Mythology," says "the gods are supernatural beings with human attributes, but the personality of a divine being is not a dogma which men in a thoroughly rude society could reason out." With the growth of mythology the perception of moral worth became more keen and intense, and the same age which listened to the book of the generation of Kronos, and Aphrodite learned wisdom from the precepts of "Works and Days." Gladstone says: "It would not be safe to make any large assumption respecting a traditional knowledge of an early revelation beyond what these words actually contain. Taken wholly by themselves the records tell us that man, made in the divine image, had one positive prohibition the violation of which was to be followed by immediate death. They tell us of a subtle beast which tempted the woman to disobey the command, and a sense of shame which followed the transgression. They tell us of their flight and hiding when they

heard the "voice of God walking in the garden in the cool of the day," and the attempt to transfer the blame; but of a revelation before the fall, beyond the command to till the ground and to abstain from the fruit of the tree, the records give not the slightest indication.

There are, however, many hints in the prophetic books of Daniel and Ezekiel which refer to the figures which stood as guards to the Tree of Life, called the cherubim, and make them



Fig. 7.—NATURAL AND SUPERNATURAL.

to be the symbols of divinity. This was all that could be done at so early a date and in so rude a stage of progress. The representation given in Genesis is plainly a correct one, and of itself is a proof of the inspiration of the Scriptures. The story of the Fall is certainly as reasonable as anything which comes to us from Paganism, for Merodach, who was the chief god of the Babylonians and who answered to the living one, or the Yahweh, is only a Nature god, and is set opposite to the monster Tiamat, who seemed to embody all the demoniacal passions that could be conceived of; a monster which was made up of a combination of the fiercest creatures upon the face of the earth. The cherubim which guarded the Tree of Life was totally unlike either Merodach or Tiamat, and yet they may have been the creatures which combined in

themselves the various forces of creation; forces which sometimes are embodied in the storm cloud and in the lightning, and sometimes in rude creatures. The symbols which still survive among Pagan races are quite suggestive, for they give us hints as to what the cherubim may have been like.

It will be noticed that the early chapters of Genesis give to us a view of the holiness of God which is in contrast to the passions and propensities of the gods of the Pagans. Even the chief god of the Greeks,—Zeus, the thunderer, was guilty of many intrigues and amours, and Juno was often jealous of her husband. The golden apple was thrown into the halls of Olympus and aroused jealousies among the goddesses.

Whatever we may say about the Jews as a race, or the history of the Hebrews, we certainly must acknowledge that the conception of Heaven and of God contained in the book which has come to us through the Hebrews is vastly higher and better than that given by Pagan mythology. The Olympian court corresponded with the palaces of the Baby-

lonian kings, for the same intrigues and jealousies prevailed there, as did in the halls of the Greeks. The picture contained in the early chapters of Genesis contrasts greatly with that given, even by Homer, for in this we are led to see the holiness of God; but in the other the wickedness of men.

IV. This leads us to the question of the location of Paradise. If we take the story in its ordinary way, we would naturally suppose that the garden was situated in a valley where the soil was rich and where the streams were numerous. This is also the common opinion, and is confirmed by tradition as well as mythology. There are, however, those who hold that Paradise was situated on the summit of the mountains, and they refer to the fact that the mountains were always regarded as the abode of the divinities. The words in the Bible however seem to refer to a single and narrow locality where well-known streams were supposed to meet, and where trees grew which were in a sense familiar, conveying the impression at once of a garden in which the scenes were enacted, which had a great influence over the destiny of the entire race. According to the Scripture record, there is no break in the narrative until the time of the Flood, and even the description of that calamity would indicate that the home of the human race had up to that time been in the same valley where the Garden of Eden had been located. The first mention of a mountain is made in connection with the landing of the ark, and from that summit the new departure of the survivors took place. Still the building of the tower and the confusion of tongues occurred on a plain, rather than on the mountain. Homer describes Mt. Olympus as the abode of the gods, but the people dwelt on the plain.

We all of us very naturally look upward and outward when we think of God and when we pray to him, but we look downward when we think of the evil one, and always imagine that Hades is beneath the earth. These are conceptions that come to us by tradition as much as they have from the Bible, and we can hardly tell which is correct; but the weight of argument would be in favor of placing the first abode of man in the valley, instead of on the mountains. It is true that there were cave-dwellers long before there were any who cultivated the soil.

When, however, the history of man begins, the scene changes, and at once we find that the Bible story contains the best description of the real conditions, and this story is located in the valley where there are streams or rivers in four different directions, and not a single allusion to a mountain height can be found. What is more, the names of two of the rivers have been identified, though the other two are very uncertain and cannot be identified by any prominent rivers which are found in the region at the present time. Some writers have concluded that figurative language was used, and that the garden

really embraced the whole region which was then, and is still, watered by the four great rivers such as the Nile, the Tigris, the Euphrates, and the Indus or the Ganges.

□ It is true that God appeared upon the summit of Mt. Sinai. The works of Homer have made the conception very common and it is not difficult for classic scholars to think of Paradise as being thus situated, but it should be remembered that what

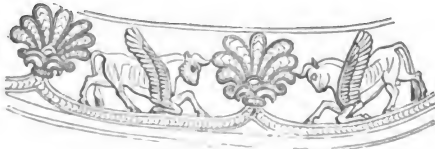


Fig. 8.—BABYLONIAN ORNAMENTS.

might be suitable for the abode of the gods would be very unsuitable for the abode of men, especially man in the lower stages of barbarism. The

mere fact that the tree was the chief feature of the Garden of Eden, and that it was in the tree that Satan tempted Eve, the mother of us all, proves that Eden was in a valley, and not on a mountain.]

The mythology of the Navajoes is interesting in this connection. They tell about their chief divinities as having been born on the summit of the mountains where the clouds meet. Their names were Hasjelti and Hostjoghon. [But the first abode of man was in a dark cave. There came a time when they passed up from this cave to another in which the sun and and moon appeared; finally, after passing through the roof the fourth cave, they came to a beautiful valley which was surrounded by four mountains, one at each corner; each mountain had a tree on its summit, and a fountain at its foot. It was a valley, however, into which a stream flowed and brought a great flood. By the favor of the gods they were able to drive back the water monster, and the valley became dry again. The rainbow spanned it in four directions.

This myth is an interesting one, for it shows how even the Indians learned from nature about the abode of gods and men and the evil beings. The mountain of assembly is spoken of by Isaiah. It is called the Gan Eden, and is supposed to be on the mountain of Hindustan, which was surrounded by four peaks and is called Mount Meru. It is supposed to be identical with Paradise.

It is claimed that the temple of the Chaldeans was an imitation or an artificial reproduction of the mountain of "assembly." In defense of this, some hold that the mystery of the Cabiri confirms the fact, and the Pyramid of Borsippa and the Tower of Babel, which were built to represent the seven planetary orbits and eight stages, answered to the eight celestial regions, the heaven of the fixed stars. It is worthy of notice that the temples of India are supposed to represent in their architecture these very same mountains of "assembly," for they were hewn out of the solid rock, and rise in successive

stories, one above the other, to a great height. The ornaments which were carved upon their surface are symbols of the Nature powers and figures of divinities which are the embodiment of those powers. The Chinese conception is, also, that the throne of the emperor is the center of the celestial empire, the meeting place of gods and men. Fo-Hi was the same as the Noah of the Bible, and was the first one who occupied the throne. The Chinese have nine cardinal points—four for the celestial and four for the terrestrial, the middle point where gods and men met was the ninth.

The Greeks imagined the abodes of their gods to be upon the mount of Olympus, here was the assembly of gods. Zeus was the great divinity who ruled over the gods. Each of the chief divinities had his own sphere.

Mythology, then, makes a difference between the abodes of the gods and the abodes of men, for the tree which bore the golden apple and which was guarded by the dog Cerberus was upon the surface of the ground, and the deeds of Hercules were all performed in the ordinary scenes of nature. The mingling of gods and men was either on the land or the sea, and there is only one case where a god from below took any one from the surface of the earth to be his companion, and that event brought great sorrow, for Persephone was mourned many days.

Persephone like Diana represents the double idea of the creative and destroying power. Her name signifies Food Shower, but as the wife of Erebus she was regarded as the Light destroyer, she was in reality the personification of the heat of fire supposed to pervade the earth.

There is a geological fact which is important in connection with the Garden of Eden. The city where so many monumental records have been exhumed is a hundred miles from the mouth of the river Euphrates. Though it is supposed that it was on the shores of the gulf at the time it was built. In fact the valley of the Tigris is yielding much evidence of an early civilization; viz.: in the valleys of the Tigris and the Euphrates and not far from the Persian Gulf.

V. We next come to the war of the Titans. It is to be noticed that all the great conquests which are described in ancient mythology, occurred between the Creation and the Flood. The chief of these was the war of the Titans. The cause of this was that Zeus became powerful and rebelled against Cronus. The Titans remained true to Cronus, except Oceanos, Themis, Hyperion and Mnemosyne. Titan and his allied forces were on Mount Orithys, while Zeus and his allies were on Mount Olympus. The war resulted in the victory of Zeus, and the Titans were imprisoned in Tartarus. Poseidon built around it a wall of brass, and Atlas was condemned to stand at the extreme west, bearing on his shoulders the solid vault of heaven.

Now, this myth covers a long transition period of earth's history, and has been interpreted differently; some have assigned it to the period before the Flood, and others to the period after the Flood, and especially to that time when the Tower of Babel was built. Pezron claimed that the Titans were the descendants of Gomer, the son of Japheth. Bryant held that they were Cushites who built the Tower of Babel. Others hold that they were only the personifications or the elements and the powers of nature. The war of the Titans was an allegorical picture of the collision of the elements in the earliest ages of the world; another explanation is that the war of the Titans represented the gods of the different nations.

The Hellenes worshipped the Olympian gods, but the Palasgians worshipped the Titanic forces. The caves, groves, springs and mountains, as well as sacred oaks were inhabited. The elements of light and fire were alive.

The war was carried on by Typhæus, a son of Gea, and Cronus, who would have over-thrown the gods if Zeus had not destroyed him with a thunder bolt, and thrust him down to Tartarus.

A later legend of rebellion, was that of the giants against Zeus. Zeus was represented as a ruler over all the elements which were personified and represented as gods. Hera was queen of heaven, and had control of the atmosphere; Hades was the god of the lower world, Pluto, or Hæphæstus, was the god of fire; Demeter was the god of earth; Gea was the habitation of mankind; Poseidon personified the water; Hestia was the goddess of life; Isis was the rainbow, and was born of the vapors which span the earth and the sea; Persephone was the daughter of Demeter, the earth mother.

There is no war of the Titans in Genesis, but we have the two classes of people, those who were the descendants of Cain, who went out and built a city, and the descendants of Seth, who was born after the death of Abel. Enoch was a son of Seth, and their men began calling upon the name of the Lord. Enoch was in this line, and Enoch walked with God and he was not, for God took him. After Enoch was Methuseah, who lived nine hundred and sixty-nine years.

A CATALOGUE OF INDIAN TRIBES

Washington, Dec. 14.—The bureau of ethnology of the Smithsonian institution is about ready to issue a very important work upon which it has been engaged more or less continuously since its organization in 1879. It is to be called "A Handbook of the Indians," and will fill two octavo volumes of about 1,000 pages each. It is nearly all in type, and the proofs are read and a large portion has already been printed. It is to be really an encyclopedia of the Indian tribes of the United States and Canada. It is impossible to separate the aborigines of the two countries, because they have never known a boundary, and since the beginning of history certain tribes have lived on both sides of that imaginary line. The two volumes will contain practically all that we know concerning the North American Indians. It had its inception more than thirty years ago, when Professor Otis T. Mason of the Smithsonian Institution conceived the plan of preparing a classified list of tribal names mentioned in the vast literature in Spanish, French and English referring to the Indians. In due time several thousand names were recorded on cards, and in connection with them James Mooney prepared a series of maps showing the distribution and location of the Indians on the western hemisphere. Professor Mason continued his labor until other duties compelled him to give it up, when it was placed in charge of Henry W. Henshaw, who formulated a plan to make the volume encyclopedic in character. On the organization of the bureau of ethnology the late Major Powell published a classification of the various tribes by linguistic stock on a scientific basis, and that is the corner stone of the present great undertaking.

The dissolution of tribal relations and the partial civilization of the Indians, their education in the English language and their adoption of the customs of white men make it very important that every fact of historical or ethnological interest concerning their aboriginal period should be collected and preserved as soon as possible. This work has not been undertaken too soon. Twenty-five or thirty experts have been at work for years among the Indians themselves, gathering authentic facts relating to the American tribes, while others have been putting these facts in chronological order and preparing them for publication. So much material of vital interest and importance has been found that the first edition will be, in a measure, only general. It is proposed to pursue the inquiries still farther and add at least two more volumes—one of geography and the other of

biography—and thus preserve much material that has been crowded out of the handbook as it stands at present.

It has been the endeavor of the editors to make the work as popular as possible and bring it within the understanding of all classes of people. It is not only a book of reference, but will be a fascinating story for those who are interested in Indian life and character. The two volumes will contain, in alphabetical order, descriptions of every tribe and settlement in America north of the Rio Grande, with accounts of their history, manners, customs, arts, industries, languages, religion and methods of government. The relations of every tribe with the United States will be reviewed and a synopsis of each treaty will be given. There will be a history of the agency system and the financial relations between the government and the Indians, and a concise account of the policies that have been applied from time to time to solve the Indian problem; the methods which have been adopted to secure their lands for white settlement, and the endeavors that have been made toward their civilization. All of the Indian wars will be described at length, and under the name of each tribe will be recorded every event and incident of importance from their first contact with the white race up to the date of publication.

Special attention has been given to tribal nomenclature and words of Indian origin have been adopted into the English language. All the tribal organizations will be defined, and the history of each will be given. In many cases there are several names for the same tribe. At the time of the early exploration and settlement of North America there were encountered many nations and tribes, varying in customs and speaking a diversity of languages. A lack of knowledge of the aborigines and total ignorance of their languages led to many curious errors on the part of the early explorers and settlers. Names were applied that had no relation whatever to those by which the same Indians and objects had been originally known. Some of them were nicknames; others were mistakes. The name of one tribe was frequently applied to another; many names were unpronounceable and could not be presented in the English alphabet. Consequently, for these and other reasons, the early literature relating to the American Indians, and much of it down to the present day, is confusing and inaccurate. The need of a comprehensive work, by which these names might be identified and these words might be applied in their proper places, has been felt ever since the scientific interest in the Indians was first aroused. The forthcoming handbook is intended to supply that need. It will include the origin and meaning of all Indian words that have been adopted into the English language, and there are many of them in common use, such as "caucus," "mug-rump," "hickory," "hominy," "opposum," "raccoon," etc.

Oriental Department

EDITED BY DR. CHAS. W. S. DAVIS

ANCIENT EGYPT AND EUROPE.

The care with which the Egyptians executed their sculptures is most strikingly illustrated by a large limestone slab on view in the Egyptian sculpture gallery of the British Museum. The subject is the gods Thoth and Horus pouring out libations of wine. The gods are as is the usual custom with the Egyptians represented as animal-headed, that is, that attached to the human body is the head of the animal sacred to the deity. Hence we find that Horus has the head of a hawk and Thoth that of an ibis.

The gods are shown as facing each other, holding on high the vase from which the libation is being poured. Both gods wear the short apron peculiar to the Egyptian scribes, and which is coloured a dark red. A short hieroglyphic inscription sets forth the names and titles of some person who was connected with the priestly class. This inscription, which is clearly cut, is painted black, and appears to be very little damaged or worn by age. This tablet is a recent and valuable addition to the collection.

At a meeting of the Royal Society of Literature, Professor W. M. Flinders Petrie read a paper on the early connection between Egypt and Europe. At the commencement of his address, Professor Petrie said that it must not be assumed for a moment that the civilization of Egypt was transplanted from somewhere to the banks of the Nile in a ready-made condition, but it was the outcome of a gradual and slow development, in which Europe played no unimportant part. Many of the specimens of pottery which he (the lecturer) had discovered in Egypt clearly prove beyond the possibility of a doubt that a connection between Europe and Egypt by way of the Mediterranean existed in very early times. For instance, some fragments of vases which were discovered in tombs of the early dynasties showed a very striking resemblance to those fragments which had been discovered by Dr. Schlieman at Mycenæ, and even in Cyprus. Many of the small statuettes which were found in the graves of Upper Egypt showed a marked similarity to those discovered in Malta and elsewhere.

Continuing, the lecturer said that one very peculiar thing, and one of the greatest importance, was that on one of the vases discovered was the outline of a galley, a form of vessel never used for Nile traffic, but often quoted by classic historians as the means of navigating the Mediterranean and other seas. Figures of men and women had also been found which showed, in their muscular development, the same characteristics as are found in the caves of Europe, as exhibited by the drawings of Palæolithic man. The lecture was illustrated by many interesting lantern views.

ÆGYPTIACA.

In a memoir upon a vase discovered at Phæstos, in Crete, which may be found in last year's "Revue Archéologique," M. Raymond Weil draws attention to the similar style of headdress upon the men shown upon the vase, presumably Cretans, and that of some of the peoples who are depicted upon Egyptian monuments as having invaded Egypt, and who are in the texts accompanying the reliefs styled people of the sea, "peoples of the north," or "peoples coming from their islands."

In the course of his essay M. Weil several times alludes to, and discusses, somewhat shortly, another of the tribes who descended upon the Nile valley whom he terms the Zakkarou. These, he confidently asserts, were a non-Semitic race, even stating that the artist who delineated them, and some other peoples, with Semitic physiognomies upon the temple at Medinet Habou, did so by mistake.

This is a reflection upon the ethnographical knowledge of the ancient Egyptians that should be investigated, and if it is probably an erroneous statement, reasons provided for at present, at all events, considering it as "not proven." Now, these people, the Zakkarou, or, better with M. Clermont Ganneau, the Zakkari (Mr. Lewis B. Paton writes it Zakkala) are well known to us from the important Golenishef papyrus of the travels of an Egyptian by ship along the Syrian shore; as at that period, perhaps, with Dr. Erman the time of Rameses XII., say 1070 B. C., being in the neighborhood of Dor, south of Carmel, in Palestine; certainly with a very Semitic "hinterland." Not only was their name Zakkari, but their chief, or king, was one Zakar or Zakkar—baal.

Now this title is purely Semitic from Zacher, "to remember," is "memorable," and is the origin of the name of Queen Dido's husband Sicharbas, as Sophonisba is Sophoni-baal; and Strabo's priest of the Syrian Zeus Kopubac is from Karoub-baal. For instance, in Hebrew we have Zacher, and Zaccur, and Zachariah; in the Tel el Amarna tablets, under Amenophis III., Zachara Syrian; in Assyrian among many other names compounded with Zachir we have Merodach-zakir-sumi, "Merodach has recorded."

The celebrated towers built in stages of Mesopotamia were called Zikkuratu, namely "memorials." The root Zakir, or Seker, was well known to Egyptian scribes as forming part of Syrian place names. Thothmes III., in a list of North Syrian cities, gives Atseker, and Isatse(q)a. The root Zaker "to remember"* appears in Aramaic and Syriac and in the word for memory. Sakar on the old Phœnician inscription; so we have now traced it into every Semitic language and literature.

If the reading for the Dor people in the Golenishef papyrus is Zakkari it may be shortened for the Semitic plural Zakkarin (or rim). M. Gameau makes a parallel between the title Zakkari and a Nabateau-Arabic tribe spoken of by the classics, the Dakker-

enoi the "enoi" being probably the Greek rendering of Semitic plural rin, or rim.

The Zakkari perhaps proudly intended by their title to be considered the "memorable" (ones) and if language is ever to be a guide as to the ethnic affinity of a people, everything appears to point to their being a Semitic stock, and if so after some 35 centuries we can vindicate the accuracy of our Egyptian predecessors.

Among the numerous relics now known of the Pharaohs of the first three Egyptian dynasties and also of several somewhat later ones, are many cylinders, or oblong circular seals, the engraving upon which was transferred to the object upon which it was impressed by rolling the seal upon it and thus embossing a tableau about two or three times greater in length than height.

This cylindrical form of signet was almost universally employed in Assyria and Babylonia until Persian times, and the occurrence of such objects in early Egyptian antiquities has been considered a very convincing argument in favor of one of the civilizations which entered Egypt having come from Mesopotamia. Such Egyptian cylinders, however, became scarcer as we leave the times of the old Empire and their use apparently ceased when the Asiatic affinities of their makers became absorbed into the Egyptian race.

There is however in the magnificent publication of the Ancient Cylinders in the late M. de Clerc's collection a perfectly preserved and finely engraved cylinder of purely Egyptian character of the Middle Empire period, for it bears a relief representing Rameses II. offering worship to Ptah and Sekhet. It is in fact a replica of innumerable reliefs upon temple walls of this and other Pharaohs.

The king wears the "Pshente" and usual helmet. Facing him stands Ptah with his hare-headed sceptre, and behind the deity is the lion-headed goddess Sekhet, carrying a staff with lotus top. In the upper field of the scene is the solar disc with uraeus serpents. The remaining space upon the cylinder is occupied by the two cartouches reading Ousirmarisot pouniri: Rameses Miamoun. The top and base of the cylinder are completed by a continuous rosace ornament of the Egyptian scroll type.

For some reason M. Ménant, who edited M. de Clerc's catalogue, considered this cylinder to be a Phœnician copy of an Egyptian original, but even if so, we still arrive at the conclusion that cylinder signets were used in Egypt in the era of the Rameside. It may however be that this cylinder was cut in Syria during Rameses' campaigns there, and perhaps is a copy by a Semitic craftsman of a relief upon the Pharaoh's chariot, or the embroidered canopy of the royal tent. If the cylinder was obtained by M. de Clerc from Syria and not from Egypt, this theory would have more weight. Perhaps Egyptologists will soon find similar relics in Egyptian collections of as late a date as this specimen of Rameses II.

JOSEPH OFFORD.

PALESTINE EXPLORATION FUND.

Correspondents frequently inquire as to our maps. It may therefore be well to say that they fall under four heads: I. The two sizes in plaster are of course the most expensive, and for obvious reasons are sent directly from London to the purchaser, if I know the party to be responsible. II. The photo-relief maps are made from these and represent on paper the relief details with remarkable clearness. III. The maps made by the Fund from its surveys and sold in sheets, or mounted to fold in a case, or mounted to hang. These maps are made with all the names of places or with only the modern names. They are not boldly colored, as American maps are, but show by delicate tints the divisions of the land. IV. The plans of Jerusalem are on paper with red lines showing discoveries and a printed explanation. These plans represent the present city and suburbs, or the city of Josephus' time. The photo-relief takes the place of the colotype and is superior to it. The plan is kept up to date and is essential to a full understanding of recent discoveries in and about the city, its walls, old and modern, water system, etc.

Although the American School at Jerusalem is as yet in its infancy, it is making a good name in the field of exploration. Professor N. Schmidt, of Cornell, was director of the school in 1904-5, and he made two trips to the eastern shore of the Dead Sea and found ruins not before described and believed to date from Roman times, perhaps earlier. He lately read before the "Society of Biblical Literature and Exegesis" a paper on "Ruins in Wady Surveil," which contributed much to our knowledge of that shore. At the same meeting, Professor L. B. Paton, the previous director, read a valuable paper on "Between the Two Walls," named in 2 Kings, xxv. 4. Professor B. W. Bacon, of Yale, the present director, will have something important to report in due time. No excavation has been attempted.

The volume, "Supplementary Papers of the American School of Classical Studies in Rome," contains matter of interest to the Biblical student. A Christian sarcophagus of the fourth century, found during the excavations in the Roman Forum, shows how scenes of Bible history were conceived of. The order of the scenes, which are separated into sections by trees, seems to be as follows: 1. Two fishermen with a rod between them; 2. The baptism of Jesus as a naked youth standing in a shallow stream of water, with the Baptist putting his hand on the head and a dove in the air; 3. The good shepherd holding a lamb on his shoulders while others look up at him; 4. A sitting figure reading from a scroll and before this figure one standing with uplifted hands; 5. Jonah represented as lying naked on the shore with a sea monster between him and the ship, which has its sail furled in token of the storm. These scenes

evidently follow the order of life from baptism to resurrection. That of the fisherman does not seem to belong to the series exactly and may need further study. Can it be the Annunciation or some other early event? The two central figures of the reader and his prayerful listener may be male and female. Both faces are unfinished and this is in accordance with the custom of making the sarcophagus ready for sale and leaving the central face or faces to be filled out with the lineaments of the deceased when the sarcophagus had been purchased. The same volume has a valuable study of bricks stamped with four hundred different inscriptions. These bricks fell from an old Roman wall in 1901 and have been fully studied by the American students. One has the swastika and belongs to the time of Hadrian. By the way, the swastika is conspicuous in the front of a beautiful church being erected by the Roman Catholics at Cambridge.

More valuable, however, to the archæologist than the Egyptian stela, is the painted pottery which is found for the first time in the fourth city. Similar pottery was found in the later Amorite strata at Lachish, and it tells a very unexpected tale. For the pottery is Hittite, and was derived from the Hittite center in Cappadocia north of the Halys. Here, at the Hittite capital of Boghaz Keui, similar pottery has been discovered, and Mr. Meyers has shown that the red paint to which it owes its first origin was the famous sandarake or "Armenian ochre" of Cappadocia. This trichrome pottery, with its peculiar designs, can now be traced from its original source of dissemination, not only westward to the coasts of the Ægean, but southward across the Taurus to Lachish and Gezer. In Palestine it rapidly superseded the wretched native pottery with its incised lines, and became more and more fashionable up to the time when the Israelitish conquest introduced new modes in pottery as in everything else. The foreign pottery of the cities which followed the conquest at Gezer and Lachish is Cretan in origin, even the lamps going back to a Cretan prototype, and marks the advent of the Philistines in the land which was afterward called after their name.

A gentleman, who spent some months in Palestine recently and saw much of our Mr. Macalister, lately said to me that he regarded him as combining in himself the most admirable qualities, making him unmatched as an excavator, and he congratulated our organization on the possession of such a man. He believes that Mr. M. has a great future in this field.

42 Quincy Street,
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THEODORE F. WRIGHT,
Honorary U. S. Secretary.

THE DOCTRINE OF SIN IN THE BABYLONIAN RELIGION.

Part 3, 1905, of the *Mitteilungen der Vorderasiatischen Gesellschaft*, is devoted to "The Doctrine of Sin in the Babylonian Religion," by Julian Morgenstern. It makes a pamphlet of 158 pages, and is a very thorough consideration of the subject. The original text in Roman character is given of the numerous quotations, with translation.

The religion of the Babylonians hitherto known only imperfectly from the statements of the ancients and the fragments of Berossus, has received new light through the decipherment of the cuneiform character. This has rendered the actual sources themselves accessible, and the monuments prove conclusively that the Mesopotamian Semites adopted the religion of the original occupants of the country almost entirely, and fused it with their own. One of the great questions arising from the recent investigations of the Babylonian religion is, in how far are the Jewish and Christian religions related to it, either through direct influence or because of race-resemblance and similar developments of religious thought, for, as Dr. Morgenstern says: "No one not blinded by belief in divine revelation, will deny that startling resemblances and a close relationship existed between the Babylonian religion on the one side, and the Jewish and Christian religions on the other. And this must be the task of the Assyriologist, to determine scientifically and without prejudice, the true nature of this relationship."

Religion was originally the relation existing between the gods and man. The duty of man to bring sacrifices and to please the gods in every possible way, that he might enjoy their favor—this was religion. The relation of man to man was entirely foreign to this. Not until late do religion and morals become one. During the thirteenth century before Christ a considerable portion of Canaan was gradually conquered by the small nation of Israelites. They entered the country on different sides, possessing a religion of extreme simplicity though not monotheistic. Their ancient national god bore the name of El-Shaddai, but it is not without reason that their great leader Moses is supposed to have established in its place before this period the worship of Yahreh. To him was ascribed the composition of a fundamental religious and moral law.

Undoubtedly this deity, by whatever name they may have designated him, was the dreadful and stern god, whose character corresponded to the nature which surrounded them and the life which they led. Misfortune of all kinds was the result of the divine anger. The gods were the arbiters of destiny, the judges, who decreed good or evil as man deserved. If evil came, the god was angry. What could have caused this? Sin! This is one of the fundamental principles of the Babylonian religion, if

not of all primitive religions—whatever incites the anger of the gods, is sin.

And what could this sin have been; what could have so enraged the deity that he sent this evil? Perhaps the unfortunate man had violated the laws of justice; had wronged a neighbor, whose protecting god thus exacted vengeance. This answer is possible, and, as morals become more and more part of religion, came indeed to be considered a valid cause of divine anger. But originally this lay nearer home. What could have aroused this anger, must have been some wrong offered god himself. But since man was related to the gods only in a religious sense, only through sacrifice sin must originally have been purely ritual. Either the man had neglected to offer his sacrifice, or else had not offered it properly.

For not everything was suitable for sacrifice. The gods partook of only the purest foods, offered in such a manner that no uncleanness could come upon them. The least impurity, and the sacrifice was defiled. And not every one could offer sacrifice or participate in the divine services. Before the priest could perform his holy duties, he had to fulfill certain requirements, had to be of noble, priestly blood, a descendant of Emmeduranki; had to be of perfect bodily growth and thoroughly acquainted with his priestly duties. Without doubt similar conditions had to be met, not only by other priests, but by laymen as well. Before the layman could bring sacrifice, he had to be ritually clean; otherwise it would not be accepted. Therefore, since it was man's duty to offer sacrifice, it was first of all his duty to keep himself ritually pure. Any neglect of these duties was sufficient cause for the gods' anger; was sin. Sin was thus originally merely the transgression of ritual laws, and as such appears throughout the Babylonian religious literature.

The usual method, by which the gods visited their anger upon men, was through sickness. Sickness was therefore an indication of sin. But more than this, it was also a state of impiety, unfitting men for participation in religious services; was therefore, not only an indication of, but in itself, sin. Sickness was caused by evil spirits, the messengers of the gods' anger. They entered the doomed man's body, and firmly seated there, carried on the work of evil, undisturbed. Their presence was therefore synonymous with sickness and uncleanness; consequently also was sin. In time the evil spirits ceased to be looked upon as messengers of gods' anger; became independent of them; the inveterate enemies of their creature, man. Consequently, even more than before, was a sick man, one possessed by evil spirits, unclean and distasteful to the gods, *i. e.*, a sinner.

Therefore in the Babylonian religious literature the expressions, sin, uncleanness, sickness, possession by evil spirits, are pure synonyms. They denote an evil state of the body, the result of the divine anger. It unfitted man for participation in

religious ceremonies; made him, for the time being, an outcast.

As has been said, sickness was a manifestation of the divine anger. To the lively, picture building, Semitic imagination, this was something more than a calamity sent by the gods; it became their actual messenger, carrying out their wrathful commands. And not alone sickness, but all evils, to which man is heir, were regarded in this light. And, as servants of the gods, they took on, to a certain extent, a divine nature; were, for all purposes, gods of inferior rank, fulfilling the destructive orders of their enraged superiors. However, so far they existed only as mediators of evil between the great gods and men.

But gradually men began to see that evil comes at the most unexpected times; that apparently he who deserves it least, suffers most. And along with the conception of unknown sin, came perhaps a faint presentiment, that the evil was not from the great gods at all; that their messengers had power to work evil according to their own wills. This view developed, until finally we have a host of gods, whose only aim is to work evil to mankind. They are, as far as their acts are concerned, entirely independent of the great deities, who now in turn, become gods of good alone. In this relation, the hosts are mutually opposed, are actively hostile; but the good gods are the more powerful. In their presence the evil ones can not stand; at the very mention of their names, the latter tremble and disappear.

In time the pantheon of the gods of evil was systematized. The different members were distinguished, and names given to each. They were no longer misfortune itself, but mighty spirits of evil, bringing all calamities upon man. However, not all attained this stage of development. Some remained mere demonifications of a particular sickness; were not its bringers, but sickness itself. Others again seem to have represented disease in general. Other calamities, such as destructive tempests, were demonified in the same way.

But altogether independent of, and hostile to, the evil spirits never entirely lost their original nature as servants of the gods. And as such, according to the established theological system, they were regarded as of divine birth. As gods of sickness, the cause of death, it was only natural to associate them with the under world. That is their real home, from whence they go forth to work their evil upon man.

Whether the Babylonians were aware of it or not, there is apparent in their theology a trace of dualism, a law of contrast as it were. Whether it may be called a law is uncertain, for the word implies consciousness of a principle, and nowhere, throughout the Babylonian literature, do we find the slightest indication of such a consciousness. But, as is the case with every nature-religion, this principle does exist; may almost be said to form the very basis of the entire Babylonian theology.

It was ever present in their literature, theology and life.

Therefore it need not be at all surprising that, in contrast to the evil spirits, good spirits also existed, whose duty was to protect man from the former's attacks. What the origin of this belief was is hard to say. That they existed solely to ward off evil, points to a time when the evil spirits had come to be regarded no longer as messengers of the gods, but as the inveterate foes of man. It is possible that the good spirits represent the remains of the belief in spirits as messengers of the gods' will, only now this was usually to protect man from the evil demons. It is also possible that the Babylonians came to see that not everybody, who became sick, died; in fact that not everybody became sick; that, in short, the power of the evil spirits must have been limited. Hence the idea, that there must be good spirits guarding man against evil.

The need for some means to expel the evil spirits from the body was very urgent. Their presence meant continual sickness and suffering, and eventual death. Life therefore depended upon, and was, in a certain sense, the result of this removal. The chief means by which this was accomplished were fire and water.

How this force came to be attached to these two elements is of course unknown. To all Semitic people they were the great purifiers, that cleaned everything from evil. Fire, too, associated with light, was directly opposed to the darkness of the night, when the evil spirits were most active. Fire and water were also the great benefactors of man, on which the very preservation of his life depended. Finally, even in the most ancient times, a certain medicinal force must have been attached to these elements, more so perhaps than to-day. Probably all these influences, and others as well, worked together, until finally, water and fire came to be regarded as the chief means employed in removing evil spirits. This is clear from the fact that the gods, most active in this work, were those of water and light.

Dr. Morgenstein considers that the most important and far-reaching question in its consequences is, how far have we advanced in our religious ideals, during the last twenty-five centuries, beyond the standard of the Babylonian religion? How much of what is generally regarded as fundamental to religion, when viewed in the light of this and other primitive religions, turns out to be merely superstition, the result of contact with an idolatrous faith? And, on the other hand, how much of the Babylonian religion is universal; constitutes religion now and throughout all time? This is a question for the theologian, the philosopher and the historian.

LITERARY NOTES.

Contents of the Proceedings of the Society of Biblical Archaeology, Vol. XXVII, Part 7: Some Unconventional Views on the Text of the Bible, VI., Sir H. W. Howarth.—The Early Monarchy of Egypt, Prof. W. M. F. Petrie.—An Unpublished Scene from the Tomb of Thy at Sakkara, representing the Manufacture of Seals, Percy E. Newberry.—Note on the word *khetemy*, "a seal-maker," Prof. Spiegelberg.—Chronology of Asurbānīpāl's Reign, B. C. 688-626, IV., The "Forecast" Tablets, Rev. C. H. W. Johns.—The Magic Ivories of the Middle Empire, II., F. Legge.

Says Professor Petrie: "The very strange antipathy that some have shown to the existence of any kings before Menes depends on the force of prejudice. There were certainly many kings before Menes, or else he could not have been king of all Egypt; such a long land was not conquered in a single reign. That Menes should have had a fully-grown hieroglyph system proves that some earlier kings used and wrote inscriptions. That the pre-Menite kings of Lower Egypt are recorded—as agreed by all—on the Palermo stone, makes it most probable that pre-Menite kings of Upper Egypt should also be found, and indeed Dr. Sethe presumes that they were also on the same record. And as Menes went from Abydos to found Memphis, it is in the royal cemetery of Abydos that we should expect to find tombs of the pre-Menite kings. All of the presumptions of the case are in favor of finding tombs smaller and ruder than that of Menes, in the royal cemetery, and belonging to the earlier kings."

The Princeton Expedition to Syria succeeded in copying some four hundred Greek inscriptions, inclusive of some copied by the expedition of 1899-1900. Of these 153 contain dates, given in actual figures as follows: first century, 1; second century, 3; third century, 8; fourth century, 24; fifth century, 55; sixth century, 61; and of the seventh century, 1. The earliest date, from Refādeh, is 73-74 A. D.; the latest from Shēkh Slemān, 601 A. D. A large majority of these inscriptions is new, though a few of them have already been published, by M. Chapot and by the Baron von Oppenheim, for example.

A great number of squeezes of inscriptions and of architectural details were made by the expedition, both in the Haurān and in Northern Syria. These are now in Princeton, where the work of making plaster casts from the squeezes is under way. Full collections of several hundred photographs will soon be available, and the preparation of the material collected by the expedition for publication is to be taken up at once.

It is proposed to bring out the publications of the Princeton expedition in a different form from those of the earlier expedition, and to publish separate pamphlets, each devoted to a single important site or to a group of less important places; each pam-

phlet is to contain all the material that the members of the expedition have collected in the site or sites described. These will probably be brought out in the order of the itinerary.

Hitherto it has been generally accepted that the oldest recorded reference to the use of stenography among the ancients was in a papyrus found by Grenfell and Hunt, dating from the year 155 A. D. In the tenth Heft of the *Archiv für Stenographie*, however, Dr. Priesigke describes a reference of a much earlier date. In the new Oxyrhynchus finds a letter has been discovered written by a certain Dionysius to his sister Didyme, dated the 15th of November, 27 A. D., in which he complains that she writes to him neither in the ordinary nor in short hand.

The *American Journal of Archaeology* Vol. IX., No. 4, contains: Richard Claverhouse Jebb, In Memoriam.—Preliminary Report of the Princeton University Expedition to Syria, H. C. Butler and E. Littmann.—Imperial Methods of Inscription on Restored Buildings: Augustus and Hadrian, D. R. Stuart.—The Palace at Nippur Babylonian not Parthian, J. P. Peters.—Geometric Vases from Corinth, M. Louise Nichols.—Theodore Woolsey Heermance: In Memoriam.—Archæological Discussions.

Contents of *Man*, December. Eoliths. Is it certain that Eoliths are made by man? Dr. H. Obermaier.—On the Origin of Eoliths, S. H. Warner.—Note on Semitic worship in Sinai, W. M. Petrie.—Reviews.

We have received Parts 18 and 19 of Dr. Muss-Arnoldt's "Concise Dictionary of the Assyrian Language," ending with *titurru*, "bridge." This work will prove invaluable to all student of Assyriology. The author has covered the whole field of Assyrian literature up to the time of the compilation, but since the work began, such a vast and important mass of literature has been published that a supplementary volume is promised. This dictionary when originally announced was to comprise eight parts, but owing to the fact that new material was constantly added since Part I. was published in 1894, the completion of the work has been very much delayed and the work very much enlarged. It was found impossible to incorporate the new material contained in the twenty volumes of *Cuneiform Texts from Babylonian Tablets, in the British Museum*, and some other recent publications.

The papyri found in the University Library of Strassburg, one of the best collections in Europe, are now to be thoroughly examined and catalogued by Dr. Preisigke. The *Vossische Zeitung* states that he has already begun the task, though he cannot give it his undivided attention, as his profession is that of telegraph director; yet he has promised to publish the first *Heft* very soon. The collection is particularly rich in documents from the period of the Ptolemies. The next best collection of papyri

in Germany is found in Heidelberg, and here Dr. Geehard has been engaged in cataloguing for months. As first fruits Dr. Deissmann has published a beautiful edition of Septuagint fragments, and these are to be followed by other documents.

The next volume of the *Archæological Report* of the Egypt Exploration Society (Hibeh Papyri, Part I), will consist of the early Ptolemaic papyri from mummy cartonnage found at Hibeh in 1902. Among the more important of the new classical pieces are some tragic fragments, probably from the "Tyes" and "Oineus" of Sophocles, a comic fragment of sixty-eight lines, probably by Menander, and one by his contemporary Philemon, from the play on which Plautus based his "Aulularia." Greek oratory is represented by some pieces from Lysias's speech against Theozotides, and philosophy by a discussion of Democritus's theory as to the constitution of the sea, to be assigned in all probability to Aristotles' successor, Theophrastus. Under the head of fragments from extant works are pieces from Euripide's "Alcestis," "Iphigeneia in Tauris," and "Electra," some three hundred lines from the treatise on Rhetoric addressed to Alexander, once ascribed to Aristotle, but now to Anaximenes, and reveal early Ptolemaic fragments from eight books of the Iliad and one of the Odyssey. These latter are specially important, as they throw additional light on the disputed question of the Homeric texts. Among non-literary papyri the first place is held by an astronomical calendar for Sais in about 300 B. C., with an introduction explaining the principles on which it is composed. The other documents include official and private letters, reports, contracts, tax-receipts, accounts, etc. This is the last time for the excavators to return to Oxyrhynchus. It is more than doubtful whether after this season they will be enabled to clear another town site, or (as they would prefer) to search for early Ptolemaic cartonnage like that found at Hibeh. The fact is that the Graeco-Roman branch cannot afford excavations every year on its present income. If it were not for the contribution of various academic bodies, it would not be possible to pay for the digging of the Roman mounds this winter and the publication of the Hibeh volume.

Mr. Oscar T. Crosby says in an article, "From Tiflis to Tibet," in the December *Bulletin* of the American Geographical Society: "At Khotan I became the fortunate possessor of a lot of precious ancient manuscripts,—a portion of those extraordinary finds which began with Sven Hedin and almost ended with the wholesale work of Dr. Stein, sent from Calcutta for that purpose. It is highly probable that all save the pieces which I brought back will find their way into European libraries, and my gratification was considerable, therefore, in being able to place in our own Congressional Library and at the disposal of American scholars what are probably specimens of the oldest

paper bearing written characters in the world. There are Egyptian and other papyrus documents that are older; but there is a certain interest attaching to these finds, aside from their nature as records, in that the material is ordinary Chinese paper preserved for probably 1,500 years or more under the dry sands which, at some far day, were swept over cities which were then flourishing Buddhist communities, and have there lain, until the keenness of the European for this sort of thing and the excavations done by the explorers above mentioned have caused the fact to reveal itself in the most interesting fashion. Portions of these manuscripts which are in Europe are being slowly deciphered, and they are found to contain Sanskrit, which is, of course, familiar to students, and two other languages which are known merely as Central Asian languages now extinct. One has been deciphered by Dr. Hoernle, of Oxford, and he will in time, with such assistance as may come to him from other students, go over the whole mass.

Das Alter der wirtschaftlichen Kultur der Menschheit, by Dr. Ed. Hahn., represents a summary of the life-work of the author in the history of primitive man. One of his main objects is to disprove the traditional idea of an evolution of the human race through the stages of hunter, herdsman or nomad, and agriculturist. Although these stages of culture have alternated at different periods in the history of primitive man, the results of modern ethnology no longer allow the acceptance of their universal succession in the order named.

Dr. Hahn distinguishes two entirely separate forms of agriculture among primitive people, by the names of hoe-culture and plough-culture. The former is the one found with primitive peoples all over the globe, while plough-culture is found exclusively with races possessing an old and highly-developed civilization. Many evidences furnish proof that in the parts of the world now given over to plough-culture, the latter was preceded by hoe-culture in primitive times. The author furnishes evidence to the surprising fact that plough-culture has nowhere developed from hoe-culture, and he looks upon Babylonia as the original center of plough-culture. He reasons that the foundations of plough-culture were twofold—the invention of the plough, and the putting the ox to it. The plough cannot have been the first vehicle to which the ox was put, as an animal which is yet to be broken in will never cut a straight furrow. The ox must have been accustomed to harness-work before he was made to plow—in other words, the chariot or the wheeled vehicle must have preceded the plow.

Contents of *The Imperial and Asiatic Quarterly Review*, Jan., 1906: The Tea Duties, Sir R. Lethbridge.—Facts of Interest and Curious Points in Mohammedan Law, C. D. Steel.—York and, E. H. Parker.—Japan and the Peace, R. G. Corbet.—Some Hindustani Proverbs, Wm. Young.—A Plea for Com-

pulsory Education in Ceylon, A. G. Wise.—Quarterly Report on Semitic Studies and Orientalism, Dr. E. Montet.—Emperor Babar in the Habibu-s-Siyar, H. Beverage.—The Ring from Paipur, R. E. Forrest.—The Pagannath Car Festival, W. Eger-ton.—The Yuman Expedition of 1875 and the Chefoo Convention, H. A. Browne.—Correspondence, Notes, and News.—Reviews, Summary of Events in Asia, Africa, and the Colonies.

"The Masai, their Language and Folklore," by A. C. Holis, has recently appeared from the Clarendon Press, Oxford. In East Africa the Masai are clearly distinguished by their language, customs, and appearance from the Bantu races, and equally clearly related to the Suk-Turkana and Nandi-Lumbwa. Sir Charles Eliot, who writes the Introduction, says: that the author "has, for the first time, made the grammatical system of the language coherent and clear," and that the book "will appeal chiefly to the scientific world, and, perhaps, with the exception of Sir Harry Johnston and Kraft's works, is the most valuable contribution which has yet been made to the anthropology and philology of the British possessions in East Africa.

The work possesses excellent illustrations of the people, their manners and customs, a well-executed map illustrating the various provinces, in accordance with their language and folklore, and a copious index.

We acknowledge the receipt of a fine quarto volume, with illuminated borders, containing specimens of Oriental type, from L'Imprimerie Catholique of Beyrouth, Syria. The specimens comprise Hebrew, Greek, Arabic, Syriac, Armenian, Coptic and Turkish, both with and without accents. One of our valuable exchanges is *Al Machriq*, a bi-monthly, devoted to sciences, letters and acts, and issued under the direction of the Reverend Fathers of l'Université St. Joseph of Beyrouth. The text is in Arabic.

At a recent meeting of the managing committee of the American School of Classical Studies in Rome, held at Cornell University, announcement was made that an endowment fund of \$100,000 had been provided.

The German Oriental Society has recently been excavating at Kasr, where they have uncovered the remains of a palace of Nebuchadnezzar and his father Nabopolassar. They have also found the remains of the palaces of the great kings of the later Babylonian empire. On the southern boundaries of the scene of this excavation were found remains of the walls of great Babylon, which will throw considerable light on the subject of the defenses of the capital city of lower Babylonia.

The German excavations at Assur, about thirty miles below Mosul, have already brought to light 4,795 objects, of which many are of inscriptions from nearly every period of Assyrian history.

CORRESPONDENCE

THE ARTS AND INDUSTRIES OF SYRIA.

On returning from a most interesting journey in Syria and the Lebanon, in the course of which we spent some weeks in Damascus and Baalbec, we arrived at a village overlooking the Plain of Coele, Syria, which lay like a large green lake of emerald verdure at the foot of the hill on which the village is situated.

On the opposite shore, so to speak, arose the great landmark, the giant Sheik, immortal Hermon, the mountain which the sweet singer of Israel used, to figure the blessing of unity, as wholesome and as beneficial as the "dews" which distill on that renowned peak.

Our coming to Kab-Elias would by most people be considered a mere chance, for it was not in the itinerary we had mapped out for ourselves on starting, but I am persuaded that there was no chance about it, and the more I think about it, the more I am persuaded that an all-directing Providence led us at that particular time, to that humble village, in order that we might give to the world a secret that has been hidden for centuries, perhaps milleniums, and which in the fulness of time it was destined to be revealed. I am alluding to the sculptures which I discovered on two huge isolated boulders, one high up on the mountains, the other at the base on the border of the plain. Sunday School Times (Philadelphia) and other daily and religious papers have described them so fully that I presume it is now pretty generally known what the one I have called the "Bull Boulder," from the fact that the principal figure sculptured on it is a bull, is like, although the heads of a cow and calf are traceable alongside of it and the head of a lioness in profile and the full face of a lion are wonderfully distinct, together with a ram's head; a winged figure and probably three human heads on the upper section of the boulder.

The other sculptured rock represents an armed female, a warrior goddess. These huge limestone boulders, exposed to the inclemencies of torrential rains and summer heat, during thousands of years, are considerably worn but enough remains to excite admiration for the wonderful composition, combination and execution what in their pristine glory must have been grand works of art.

Archæologists have not yet had time to discuss the question of their antiquity, but it has been suggested that they belong to the Sargonic period 3800 B. C., and show the influence of Babylonian culture on Canaanitic art.

If they be not prehistoric they must at least have been sculptured when animal worship was prevalent and that would take us back at least five milleniums.

The female figure holds a sword in her right hand and a spear in the left and although the upper part of the head is defective, she appears to wear a helmet.

This figure is doubtless a representation of Astreat, the goddess of passive fertility and of war, the wife of Amurru, who corresponds with the Syrian Hadad-Rimmon, the weather-god, represented on the upper boulder as a "bull," signifying generative power and active fertility.

Whether we regard these sculptures from an artistic or archaeological standpoint they are full of suggestion and their discovery at this time, when they are on the point of crumbling away, and cannot be expected to weather many more decades, let alone centuries, must be considered of no little significance and cannot fail to throw light on more than one problem in ancient religious and Oriental archæology.

* * *

A NATIVE SYRIAN INDUSTRY—WEAVING.

The native industries of Syria are fast becoming extinct, partly owing to emigration and partly owing to the introduction of foreign goods; moreover native methods are being superseded by Franji (European) operations and it is therefore especially interesting to get a glimpse of one of the most picturesque and useful industries before it becomes a thing of the past.

The village of Behfayia, about five miles from our mountain home, is the center of native-weaving for this section of Mt. Lebanon and a recent visit there afforded a favorable opportunity for witnessing the various operations. In former times cotton was grown and spun in different parts of the country, now, however, it is brought from Manchester in large hanks containing 16 skeins apiece; thus at the outset the work is rendered somewhat easier by having the native material all ready to hand.

Let us observe the different processes from the very beginning.

We must be up early enough to see the men leave their homes at dawn, or go to the workhouse, load themselves with bales of white thread, carry them on their backs to the fountain and dump them on to the ground by the stream. Each man now takes out a single skein, opens it and steps into the channel at a little distance from the spout and tucking up his baggy trousers into his girdle so that his legs are bare below the knee, he throws the skein into the pool of water, with its pebbly bottom, and commences to tread on it. In a few minutes he takes it out, squeezes it somewhat, opens it and passing it several times through his hands like a wheel, flings it with a great thud on to a smooth stone slab, be-

side him, he then gathers it up and thumps it again and again; thus he treats each skein.

When the washing and thumping process is complete, he collects the damp skeins together and carries them to the dyer, where we will accompany him. The room is dark, narrow and oblong. Along the sides of three walls is an erection made of stones and mortar, covered finally with a species of plaster, into which say thirteen cauldrons, a foot and a half in diameter are embedded; five on either side and three at the farther end. Under each cauldron about a foot from the ground is an aperture for the fire, so that the dyer can use as many or as few cauldrons at a time as his work in hand requires.

Several large earthenware bowls are on the floor. These have no doubt been used for mixing the dyes. An old man, sitting on a low stool with a flat, smooth stone in his right hand is grinding or smoothing some of the pigment against the bottom of the vessel; his help meanwhile is putting the skeins newly brought, into the dye, previously prepared.

After drying, when dyed, the skeins are put through a kind of size, starch or rather paste, made by the women, by boiling flour and water together. The thread is now ready for putting on to bobbins. Accordingly all the women who own little hand wheels take it in hand and sitting before the doors of their houses guide the thread (from a little revolving frame onto which the skein is thrown) on to little pieces of cane about six inches in length, turning the wheel with the right hand while they direct the thread with the left. The bobbins having been filled with variously colored threads, blue, red and yellow predominating, they are now ready to form the long thick skeins for the loom. For this purpose the bobbins are arranged in rows, on a kind of table-like stand studded with iron spikes a few inches apart, there are six rows, each containing say forty bobbins. A thread from each bobbin is passed through a hole in a perforated iron frame placed uprightly at the end of the stand, by an operator, who sees the threads when they break, etc. These, two hundred and forty threads, passing through individual holes (as through a sieve) are caught together in one hand by a second operator and directed on to an immense hexagonal wheel about twelve metres in circumference.

This wheel, about six feet high, is a frame composed of six upright poles attached to one in the center by bars or spokes and made to revolve by the operator (or by little girls inside, pushing it round) who place the thread at equal distances upon it as it revolves.

These immense skeins are then taken off the wheel and put on a pole and placed horizontally between two trees or fastened on to a wall in the sun to dry. They are then cut and ready to be threaded into the heddles prepare by a woman who sits on the floor in front of a horizontal frame, netting the thread over a

piece of cane, a little over two feet in length. Each loom requires six heddles.

The long skeins (some twelve metres in length) are drawn over pulleys attached to a beam in the roof; weighty stones are fastened to the ends to keep them firm. The upper and lower threads are separated by lengths of cane and the individual threads are passed through a many toothed arrangement, like a comb, attached to the frame.

The operator at the loom sits in front, opening the heddles by means of a treadle while he directs the shuttle and controls the cloth with his hands.

The material woven in Bekfayia is striped "deema" of different colors, it is strong and desirable. It is worn by men in the Ghambaz, an upper loose robe extending nearly to the ankles. Women also wear it for common house dresses but it is rapidly going out of fashion for the more popular pretty and flimsy prints which attract the eye in every village as well as town-shop.

* * *

THE MONUMENTS AND THE FALL OF SAMARIA.

"In the ninth year of Hoshea, the king of Assyria took Samaria and carried Israel away into Assyria."

In the 20th chapter of his prophecies, the prophet Isaiah speaks of a certain Sargon, king of Assyria, as having sent his field-marshal against Philistia, but up to the middle of the last century no mention or trace of this Sargon could be found in any literature, or anywhere except in the 20th chapter of Isaiah.

Jewish and Christian critics tried to identify Sargon, now with Shalmanesar, then with Sennacherib or Esar Haddon and others supposed Sargons to be a mere "ideal" king.

Infidel criticism jeered heartily and declared that the mention of this Sargon by Isaiah was a discredit to the prophet, for since no other writer had ever heard of Sargon, this mention of him must be a mistake. In 1843 Emile Bossa began excavations at Khorschbad and in the words of Friedrich Delitzsch, a leading enemy of revelation. The very first Assyrian palace to be discovered was that of this Sargon, the conqueror of Samaria.

"Upon one of the magnificent alabaster reliefs with which the walls of the palace chambers were adorned, the very person of this mighty warrior conversing with his field-marshal meets our gaze."

This alabaster relief is now on the Louvre in Paris, while another image of this long-lost Sargon has, strangely enough, been discovered at Larnasa, Cyprus, and transferred to the museum at Berlin and in the British Museum are Babylonian records which state that on the 12th of Tabiter, in the 5th year of Shalmanesar, Sargon succeeded to the throne of Assyria.

It is further learned from the monuments, that the empire of the Hittites which had defied Rameses the Great in the 13th century and the Assyrian kings during the centuries following received its death blow at the hand of this Sargon in 717 B. C.

Thus it is now demonstrated to the satisfaction of everybody, that the prophet Isaiah made no mistake, though 50 years ago no other writer of antiquity could be found to support this statement of Isaiah xx. 1.

But our interest in Sargon is greatly aroused on grounds other than apologetics. For Shalmanesar IV, who began the siege of Samaria II Kings 17:3-5 did not live to see it ended and the actual reduction of the capital of Israel was accomplished in the beginning of Sargon's reign, the successor of Shalmanesar.

This fact was doubted until lately, when two inscriptions of Sargon were found, which are the same in substance.

The following is a version of the first: "I besieged the city of the Samaritans and I took it. I took 27,280 of her inhabitants AND TOOK 50 WAR CHARIOTS WHICH I KEPT FOR MYSELF. I LEFT ITS WEALTH FOR MY SOLDIERS AND I APPOINTED RULERS OVER HER IN MY BEHALF AND I LEVIED ON HER THE TRIBUTE WHICH SHE PAID TO MY PREDECESSORS." (comp. II Kings 17-3.)

Shweir, Mt. Lebanon, Syria.

MRS. GHOSN-EL-HOWIE.

* * *

LITERARY NOTES

A very interesting and truthful sketch of Spencer F. Baird, for a long time the head of the Smithsonian institute, by Mr. T. J. Cockerell, the University of Colorado, is contained in the Popular Science Monthly for January, 1906. Also the four half-tone cuts representing the campus of the Tulane University and an interesting account of the British Association in South Africa with nine half-tone cuts. The magazine is well edited by James Cattell and holds to the same high standard of character as it always has in the past.

The annual Archæological Report for 1903, appendix for the Minister of Education of Ontario, contains an account of the relics, stone and copper, found in this region, among them a number of rude pipes, a few copper tools, several bone combs, butterfly ornaments, gorgets, arrow-heads. An article on who made the effigy pipes by Joseph D. McGuire, a flaring mouth of a trumpet is supposed to have been borrowed from the whites, but the imitation of annual forms is found from Ontario to Peru. The American Indian possessed copper artificially worked before the time of the discovery.

Mr. John Murray, London, has recently issued *China and Re-*

ligion, by E. H. Packer, Professor of Chinese at the Victoria University, Manchester. Professor Packer endeavors to show that all religions are purely human institutions, the main double object of which has always been and is to account for the unknown, are to regulate the order of human life. While he does not formally state this view as his own opinion, yet one reading between the lines cannot help come to the conclusion that they must really be the author's view. The twelve chapters of the book are each in turn a historical retrospect of the twelve religions which have from time to time presented themselves for consideration to the Chinese mind. The overpowering influence of Taoism, upon many, if not upon all, of the later teachings is described in detail and the whole the Taoist classic is translated word for word in an appendix. The book is illustrated with photographs, and it has a very complete index, which enables the reader to control facts and dates by back and counter references.

The *Report on Archaeological Work in Burma* for the year 1904-1905, is divided into two parts, with subsections in each. Part I gives details of programmes carried out and of that proposed next year. Part II is a report of the works of restoration and preservation of important buildings, and sites of excavations and fresh discoveries. Under section 2 of this part there are the plans of Halingyi, Kalagôn, Payagôn, or ruins of a pagoda, and Lamayangyi. There are also numerous appendices, containing amongst them, lists of buildings of archaeological, historical, or architectural interest, to be maintained, either by the Public Library Department or the Government. (Rangoon: Government Printing Office).

Michel Revon, formerly professor of French Law at the Imperial University, Tokyo, has written a book of over 200 pages, entitled, *Le Shinn-Toïme*, which has for its objects to show that the Japanese had a genuine primitive religion, developed on the usual lines of Nature-worship, Animism, Hero-worship, Fetichism, etc., long before the arrival of Buddhism and Confucianism from China, via Corea, forced them to invent a special name for it. The name they then chose for their old religion was *Shen-tao*, or, in pure Japanese, Kami-no-michi, "the spirits' (or gods') road." This purely Chinese mold first appeared in Japanese history in 586. M. Revon thinks that, if the ancient Chinese and the ancient Japanese religious ideas correspond, it is not because one was derived from the other, but because each developed on its own independent lines. He believes that the Japanese *Shinto* contains a moral code and is really a religion, though perhaps not in our Western sense—i. e., complicated by abstract metaphysics. Professor E. H. Packer, the Chinese scholar, considers, that as a study in religious evolution, M. Revon's work is excellent, but as an attempt to deprive China of the honor of having created Japanese abstract thought it is of doubtful value. This book is published by Ernest Leroux, Paris.

RECENT EXPLORATIONS

PALESTINE EXPLORATION FUND.

The decease of Sir Charles Wilson removes from us the chairman of our Executive Committee and from the list of Palestine scholars one of its noblest names. As a young officer of the Royal Engineers he went out to study the water system of Jerusalem and to plan for its restoration. He was also concerned in the expedition to Sinai, the good results of which are set forth in Palmer's "Desert of the Exodus." From that time to the present, nearly forty years, he has been a close student of Palestine geography in general and of Jerusalem topography in particular. No one knew it better. At the same time he was so modest and cautious that he always expressed his views in a way to stir up no controversy and was in this respect a model which others might imitate to advantage. Indeed his conclusions were so gently put as almost to conceal his own convictions on mooted points like the Sepulchre. He was at the same time a fearless soldier and led the little band who reached Khartoum two days after Gordon's death. I hope that the lesson of Sir Charles Wilson's love of truth will not be lost, and that all who are engaged in Palestine study will heed it, so that there may be no national prejudice and no ambition for personal fame to warp the judgment and degrade the tone of those who come after him.

Sir Charles Watson, also of the Royal Engineers and lately British Commissioner to the Louisiana Purchase Exposition, has been made head of the Executive Committee, and he will bring to his office the deep interest which he has long felt in this work and the courtesy which won so many friends for him at Saint Louis.

Casts of the two tablets found at Gezer have been made and may be obtained of me for fifty cents each. They show a style different from the solid lettering of the Lachish tablet.

Mr. Macalister is sure to be busy in the interval of awaiting the new foreman for Gezer and has made a visit to Marissa, with the result that something is added to our knowledge of the inscriptions, so that their meaning becomes more clear. His results will soon be available.

The *Scientific American* lately printed an editorial as to the Siloam tunnel, comparing it, on the authority of Professor Bertholet of Basle, to the Simplon. This is an exaggeration. A railroad tunnel of the present day is as accurate in direction and all details as instruments of precision can make it. The

Siloam tunnel is uneven in height, varying from two to nine feet, and is tortuous in its course, showing apparently that errors were made soon after work was begun at either end, and it is really nearly twice as long as it would have been if it could have been held to a straight line. For that day it was a wonderful work, but comparisons with modern work, however eloquent, are hardly fair, since its engineering is of the most primitive type. The history of the exploration of this tunnel should be separately written. Three hundred years ago Quaresmius did not dare to enter, but he found a priest who was bolder and who went in some distance from either end. Our own Robinson did the same, but he marked his first goal and so knew when he reached it from the other side. Tobler explored it. Warren and Conder did thorough work, but the inscription was first described by Schick.

Already in the ruins of the third city Egyptian scarabs occur, notably one of a king of the Sixth Dynasty. In the age of the fourth city they become plentiful along with other objects of Egyptian origin. At first they belong to the period of the Twelfth and Nineteenth Dynasties; as time goes on, they become Hyksos. Together with them have been found vases of diorite and alabaster, as well as mace-heads of Egyptian type, and a hippopotamus of terra-cotta. But the most important monument of Egyptian civilization is the stela of an Egyptian official, Amon-dudu by name, which appears to have been set up within the precincts of the high-place itself. Like the earlier scarabs, it is of the age of the Twelfth Dynasty, and makes it clear that Egypt must already have claimed and exercised some sort of suzerainty in the south of Canaan.

Iron first made its appearance at Gezer in the latter period of the second Amorite city. It is not till we come to the city that corresponds in its remains with the Israelitish town which grew up on the ashes of the Amorite Lachish that it becomes at all plentiful. Bronze, in fact, long continued to hold its own, and while iron was used for agricultural implements and nails, bronze was still preferred for weapons of war. The ironsmith, however, had been long in the land, and a furnace with remains of iron slag was discovered at Lachish under the bed of ashes. The Canaanites, as we read in the Old Testament, had their chariots of iron, and an Egyptian satire on tourists in Palestine in the time of Ramses II describes the traveler as going to the smithy of an ironsmith when his carriage had been damaged on the mountainous roads.

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THE OLDEST KNOWN BODY

The Government of Egypt has agreed that the international Archæological Congress, which convened this year in Athens, shall hold its next convention in Cairo in 1907. The Khedive has consented to appoint a local committee of arrangements; the Athenian committee, however, to retain the general management. It is also announced that the transactions of the convention held in Athens are to appear within the next few weeks, and are to be sold through the trade at an exceptionally low price.

The oldest known body of any human being now reposes in the Egyptian gallery of the British Museum. It is the body of a man who was buried in a shallow grave hollowed out of the sandstone on the west bank of the Nile in Upper Egypt. This man must have hunted along the banks of the Nile before the time of the earliest mummied king which the museum possesses—before the time of Menes, who was supposed to have ruled Egypt at least 5000 B. C. There were previous to that time two prehistoric races, one the conquerers and the other the conquered, from which sprang the Egyptian race of the earliest dynasties. It is with these remote stocks that this man has to do. Considering the condition in which he was found it is evident that he was associated with a late period of the new stone age of Egypt. He was buried in a characteristically neolithic grave and his neolithic pots and instruments of flint about him. There is, of course, no inscription of any kind on the pots, knives or grave, all having been made long before the invention of any written language.

The Governor-General of Egypt has promulgated an ordinance by which the government exercises its right of possession of any archæological remains and antiquities discovered in the Soudan, comprising buildings, monuments, remains or objects of whatever age or people, which are illustrative of arts and sciences, industries, religion, history, letters and customs, and that were built, made or produced in the Soudan, or brought thereto prior to the year 1873 of the Gregorian calendar. Although the law is limited to the year 1873, the Governor-General is further empowered to declare right of possession to any object whatsoever in, or attached to, the soil after that year. This decree will deal the death blow to the Egyptian "faker" and his nefarious traffic in coins, papyri, and other spurious antiquities, in the sale of which he plies a thriving trade during the winter season among the credulous tourists.

EDITORIAL

DAMASCUS THE MOST ANCIENT CITY.

(See Frontispiece)

Damascus is one of the most ancient cities in the world. It is also about the only city which has passed through so many changes and is now classed among modern cities. The most remarkable feature about it is that the names of so many of the most noted Biblical characters were associated with it.

According to Josephus, Damascus was founded by Uz, the son of Aram, the grandson of Shem and so was the great-grandson of Noah. It is first mentioned in the Bible in connection with of the place. It appears to have been a Semitic settlement from an early date and was never occupied by the Accadians. In this respect it resembled Haran, the place from which Abraham migrated. There is a tradition that Abraham, after his departure from Haran, tarried at Damascus before his final departure for Abraham whose steward or servant was Elezer who was a native of the Promised Land and was a "king of the place."

Little is known of Damascus until the time of David, though it is supposed that during David's reign, the Syrians of Damascus came and slew Hadadezer, the king of Zobah, with whom David was at war. David, however, slew 20,000 men and became master of the whole territory. It appears that Rezin, who was escaped from Damascus at the time that David conquered it, afterward himself mastered all the city during the reign of Solomon and was an adversary of Israel all the days of Solomon's reign. Rezin, a subject of Hadadezer, made himself master of Damascus and even subjected Samaria to his power; the Scripture says "Made himself streets in that city."

The next event in its history was when Ben Hadad came at the head of thirty-two subject kings and made war against Ahab, the king of Samaria and was taken prisoner. The defeat and death of Ahab afterward encouraged the king of Assyria to extend his dominion over Syria and Palestine. Hazael, a servant of Ben Hadad, afterward overran the whole territory east of the Jordan. He took Gath and even threatened Jerusalem and established a suzerainty over Israel which continued during the reign of Ben Hadad. After this time the Assyrians from the valley of the Tigris made war in this direction. He, with Rezin, king of Damascus and Pekah, king of Israel, attacked Jerusalem. This attempt signally failed. Ahaz was obliged to seek protection from Tiglath Pilezer and became subject to him. The result

was, that Rezin, the king of Damascus, was slain and the kingdom of Damascus was brought virtually to an end. Isaiah and Azariah had prophesied Damascus "should be taken away from being a city and become a ruinous heap." Jeremiah had declared "that Damascus is waxed feeble and that fear hath seized her." "Anguish and sorrow hath overtaken her as a woman in travail."

Damascus recovered her strength, however, and was rebuilt and during the Persian period became the most famous place in Syria. It is during the Christian era and in the days of Paul that Damascus became best known. In fact, it was because of Paul's visit to Damascus that it is celebrated to this day. At that time there was a street which was called "straight." It was so called because nearly all the streets of ancient cities, including those of Jerusalem, were very crooked.

Damascus also was celebrated because of Paul's escape from the city. He was let down from the wall. It was near Damascus that Paul had the most remarkable experience and was converted and changed from being persecutor to the most devoted disciple of Jesus of Nazareth. These are his words: "And it came to pass that as I made my journey and was come nigh unto Damascus about noon, suddenly there shone from heaven a great light round about me and I fell unto the ground and heard a voice saying unto me, Saul, Saul, why persecutest thou me? I answered who art thou, Lord? And he said unto me, I am Jesus of Nazareth whom thou persecutest. And they that were with me, saw the light and were afraid, but they heard not the voice of him that spake to me."

The most singular feature about the city is that the very street that was called "straight" remains to this day and the place in the wall from which Paul was let down in a basket and escaped is identified.

The frontispiece illustrates these points and is worthy of study because of the associations with the great apostle to the Gentiles.

THE RELIGION OF THE POLYNESIANS.

The Journal of the Polynesian Society in an article by Lieut. Col. W. E. Gudgeon, says: There are traces of two religious systems, one of which is truly abstract in conception of the Deity. It attributes the existence of all things to the great god Io. The second is a conception in which the powers of nature are personified in the persons of certain anthropomorphic gods. According to the first, Io, the Supreme Creator, occupies a position superior to that of any other deity; he is the great originator, the "All Father." It is claimed that he dwelt in the expanse and without habitation. It would seem that the name originated in the East for, among the ancient Egyptians, Io was the human goddess and among the Argives the Moon itself, but the Maoris, for

reasons best known to themselves, have avoided all reference to this god. The Samoans ascribed to Tangaroa a divine power which the Maoris claimed for Io. At this period there was neither sea nor earth, but only a rock for foundation. Tangaroa is described as striking the rock which gave birth to the earth, and then to the sea. Subsequently it gave birth to the fresh water, the sky, immensity and space; then came a boy, a girl, a man, the spirit, heart, mind and understanding. To the Maori Tangaroa is merely one of the children of heaven and earth, and has jurisdiction over the sea only. Among the Greeks, Latins and Germans the earth invariably received the epitaph of mother, and we learn from the mythology of the first named people that Uranus (the heavens) cohabited with God and had issue Cronos, Oceanus, Hyperion, and the Titans, but he subsequently took to wife Rhea who bore him Hera, Hades, Demeter Poseidon, Zeus (the ruler of the upper world). It is moreover clear that the Greeks revered and personified the vault of heaven as the Supreme Being. In like manner the Maoris hold that Papa-tu-a-nuken was the mother of the Gods, that is of a certain class of gods of which Rangi (the firmament) was the father. Therefore from heaven and earth sprang all things necessary to man, and incidentally man himself.

In this myth, we have probably the germ of all religious systems born of the awe and gratitude which must necessarily arise in the minds of a thoughtful and observant people, when contemplating the operations of nature.

The religious system of the Maori does not in all cases follow that of the Aryan people, for they do not have any such reverence for the love and they give all credit to the Firmament Rangi.

The Maori people hold that the man-god Tawhaki when assaulted and apparently slain by his brother passed through the gateway of night and entered the palace of the shades, but had he passed the ancient ancestors, Rua-toia and Rua-Kumea, he could never have returned to the world of light. Rua-Ki Pouri is the house of Meru the portal through which the disembodied spirit must pass into the nether world. The statues of this deity Maru as a breaker of the bonds of Hades, he shows the guardian of Hades, namely Remga from whence there could be no return. Mr. Gerald Massey, says a persistent Greek tradition asserts that the primitive abode of the Egyptian was in Ethiopia and mention is made of their ancient city Meroe. He adds also that the inhabitants of the city were called Sabeans. North of the Himalayan range tradition has placed a mountain called Meru which is said to have been the birthplace of the Aryan people; it is also said to be the center of the universe surrounded by seven circles of rocks, and the pyramid of Cambodia especially the magnificent temple known as Nok-kon-Wat. The author thinks, that the same idea possessed the builders of the terraced pyramids of the Pacific. The great temple is built only on three

terraces but the ancient city had seven terraces in order to correspond with the seven circles of Meru.

The Maori idea of the creation is peculiar. At first the people lived in darkness or in a dim twilight, for the earth was overshadowed by the presence of the "All Father" the male principal. But the children of heaven and earth had reason to believe that light might be obtained provided they could permanently separate their parents; accordingly Tane Mahuta with his back on mother earth and his feet planted firmly upon the heaven above, separated his parents while his brothers fixed the props to keep them forever apart. From this arose the war of Tawhari matea against his brothers, the war of the Titans. Winds, rain, hail and snow beat upon them, and they fled. Tangaroa fled to the sea, another son fled inland and transferred themselves to the giant trees of the forest, another sought safety in the Tu-mata-menga, alone of the godlike descendants remained unmoved by this war of the elements; he was exasperated by his brothers and he converted them into food; hence it is that man even to this day eats the fruit of the earth and the fish of the sea. The Maoris believe that it was the earth itself that caused man to return to the dust.

All over the Pacific the name of Maro is suggestive of a future state. Their conception of Hades is that of a place of bloom rather than of punishment, the offenses of God are punished in this world and not in the world to come. But there was an abstract body which has a life of its own independent and apart. It was that which survives the man after he has left this world and entered the world of shades. The Mahata is the power of thought, the reasoning faculty. Mauri is the vital spark and when a child has been baptized this mauri is sent for safe keeping to the eighth heaven. The Maoris hold that the sea has a mysterious power of preservation. In this summary of the Maori religion, we find the traces of the old tradition of the flood. The story is to the effect that the god-like race of beings who at that period inhabited the earth, were unfit for the positions they occupied. The divinity therefore resolved to make man after his own image, using the clay of the earth to carry out his purpose. He built an altar in a place situated near the mythical home of the Maori people. He made an image of clay and imparted to it the power of digestion, the circulation of the blood, the beating heart, and breathed into the nostrils of the clay, imparted the spirit of life, and the clay became man. All that is godlike in man was derived from the breath. The Wairua is the astral body, which has a life of its own, independent of the earthy tenement. They have similar ideas on the subject of life and death derived from the belief in the dual origin of man. The Maoris believe that they were something more than human; that we are the elder sons of earth.

BOOK REVIEWS

THE LITTLE CLAY CART.

A Hindu Drama Attributed to King Shuraka, Translated from the Original Sanskrit and Prakrits, into English Prose and Verse.

BY

Arthur Wm. Ryder, Ph.D., Cambridge, Mass., Instructor in Sanskrit in Harvard University, 1905.

This book is Vol. 9 of the Harvard Oriental Series, which contains some of the greatest works of Hindu literature, philosophy and religion. The title is a strange one and does not give any idea of the contents of the book. The book itself is also a strange one, for it bridges the distance between the new world and the old world. The English language is spoken in America and the sanskrit is spoken in India. It hardly seems possible that there should be any similarity between the two languages, or between the modes of thought and styles of expression which were peculiar to the ages so widely separated. Yet there are in the translation a great many phrases and expressions which would lead one to imagine that the book was written in the 19th century and in the western part of America. In fact the play, if it were introduced upon the stage, might be taken for one that was written for an American audience. The translator says:

The author of *The Little Clay Cart*, Shudraka, has a cosmopolitan character. Nowhere else in the sanskrit drama do we find such variety. The characters are living men and women. The author draws on every class of society. He says: "he has endeavored to preserve the form of the original, and given the matter in English in the form of rhyme and stanza, but the most singular feature of the book is that there are so many expressions that are so common at the present day, and the cast of the characters is just such as interest modern audiences. The question is, how comes this great similarity? Every one knows that the Hindu language belongs to the same great stock as our own, the Indo-European, and yet they are so different that there are very few who read the sanskrit or are familiar with the type of mind or character. The question arises where do such expressions as are found in the book come from? Do they come from the original sanskrit, or are they introduced by the translator. We select at random a few of the expressions which will strike every one to be decidedly modern colloquial phrases to have risen which

were totally unknown to the Hindus. The Hindu might express his surprise by "goodness." "man, you are crazy," "out of the way, gentlemen, out of the way," "This way, sir; come on little boy," (page 36) and might be compared with some of the slang words. Catchy phrases which are common among the western frontiers. A thousand lotuses that bloom by night reminds us of the Far East, but there are many expressions which remind us of the far West, such as "When you haven't a copper left," "I stood stock still and acted just like a post," "Men learn from books, a little bit," "Confound it," "Who are you, anyway?"

There are also allusions to elephants and Brahmins, but there are also allusions to reed pipes and snare drums. There are golden caskets and lotuses, and bull carts, ivory portals, but there are also kitchens and cooks and quails and partridges and grave yards, apple trees and fences. The horse and the jack-ass are associated with the pea-cock and umbrellas. The drama has been compared to the plays of Shakespeare and the author represented equal to Shakespeare but the title of "The Little Clay Cart" certainly lacks the dignity, and does not compare with the titles of any of Shakespeare's plays. The language which was used is supposed to have been that which was common among the Hindus two or three thousand years ago, but the cast of thought is that of the present time. "The lack of money is the root of all evil," "pride and tricks, lies and fraud are in your face" in this world mysteries or in the next, "a poor man is a man ashamed," "too high thy love must not aspire," "a tree of life to them whose sorrow grow" beneath its fruit of virtue breeding low." "Oh! the rattle of din is a charming thing when you haven't a copper left," "you run to hell if they'll take you in."

* * *

MY SIXTY YEARS ON THE PLAINS.

Trapping, Trading and Indian Fighting by Wm. T. Hamilton (Bill Hamilton). Edited by E. T. Suber. With eight full-page illustrations by Charles M. Russell, New York. Forest and Stream Publishing Co., 1906.

This is an autobiography of one who became familiar with the frontier life at a time when the stages were running across the plains and when the Indians were in constant evidence, and when California was the great Eldorado and every one was talking about the gold. There are few such adventurers left in the country and there is no particular demand for them. The book is full of reminiscences and is nicely illustrated. We have the pictures of horses and buffalos and free traders and horse thieves and Pawnee horse thieves and trappers, all come before us in quick succession. They are full of activity but they belong to a period which has passed away.

THE SECRET OF THE TOTEM.

BY

Andrew Lang. Longmans, Green, & Co, 39 Paternoster Row,
New York and Bombay, 1905.

The totem system has long been a subject of study by ethnologists. Mr. Andrew Lang is regarded as good authority upon it. He says it is useless to look for the origin of totems among the "sports." There are various theories in reference to it. One is that the earliest human beings lived in small groups, another is that the animal names were given by societies that worked magic. Another was that the tribe had medicine men who could see visions. "Group marriage" also comes in for consideration. Belief in the spirits of *primal ancestors* is another cause. Belief also in reincarnation. Max Muller held that a totem was a clan mark. Mr. Hill Tout says to receive the name of an animal is to be under its protection, in a mysterious sense. Mr. Frazer's theory is that totemism is found upon a prenatal impression that the mother is impressed with a mysterious movement, something that has passed into the body and is interpreted as the spirit of an animal, so the name is given.

These different interpretations are interesting but it is not at all certain that they give the real explanation.

BOOKS RECEIVED

Among the new books on Oriental subjects, published in England, are the following:

Asia Minor, Transcaucasia, Persia, etc.: Handbook for Travellers in. Sir Chas. Wilson. 8vo. 185.

Korea and Her Neighbors. Narrative of Travel. Mrs. I. Bird Bishop. 8vo. pp. 344. 5s.

An Eye-Witness in Manchuria. Lord Brooke. 8vo. 7s. 6d.

Hebrew Humor and Other Essays. J. Chatzner. 8vo. pp. 186. 5s.

The Drift of Buddhism from India to Mongolia and Thibet.

A History of Ottoman Poetry. E. J. W. Gibb. Vol. IV. 8vo, pp. 364. £1 1s.

China in Law and Commerce. T. R. Jeenigan. 8vo. 10s 6d.

Israel's Historical and Biographical Narrative. C. F. Kent. 8vo, pp. 538. 12s.

Studies in Ancient Persian History. P. Kerssharp. 8vo, pp. 196. 3s. 6d.

The Far East. A. Little. 8vo, pp. 342. 7s. 6d.

Catalogue of the Hebrew and Samaritan Manuscripts in the British Museum. G. Margoliouth. Part 2, Folio, pp. 492. £3 15s.

Native Races of South Africa. G. W. Stone. 8vo. £1 1s. 3s. 6d.



SACRED CIRCLE NEAR PETRA



ALTAR IN HIGH PLACE.

THE
American Antiquarian

VOL. XXVIII.

MARCH AND APRIL,

NO. 2. 1906.

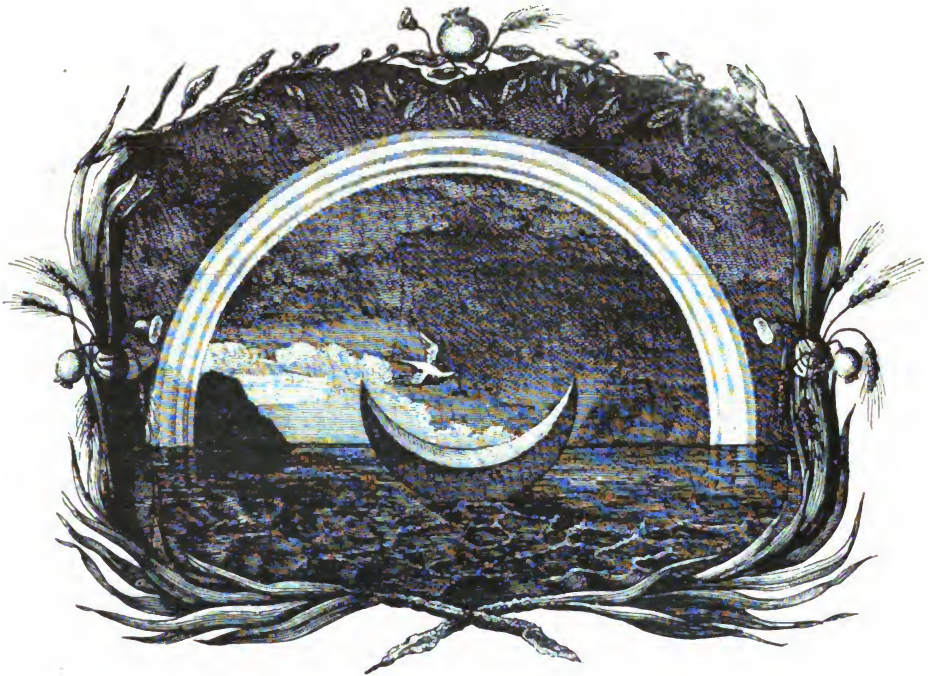
THE BOW IN THE CLOUD: THE TOKEN OF A COVENANT.

One of the most important events described in the Bible is the one which occurred immediately after the flood. It appears from the narrative that the ark, which had floated over the stormy waters for one hundred and fifty days, had finally rested upon the summit of Mount Ararat. It is not stated definitely how far the flood had extended. All that we know is that waters prevailed and increased greatly upon the earth, and all the high hills were covered. Fifteen cubits upward did the waters prevail; and God remembered Noah and all that were in the ark. And God spake unto Noah saying, Go forth from the ark thou, and thy wife, and thy sons, and thy sons' wives with thee. Bring forth with thee every living thing that is with thee, both of fowl, and of cattle, and of every creeping thing that creepeth upon the earth. And Noah went forth, and his sons, and his wife, and his sons' wives with him. And Noah builded an altar unto the Lord; and took of every clean beast, and of every clean fowl, and offered burnt offerings on the altar. And the Lord smelled a sweet savor; and said in his heart, I will not again curse the ground any more for man's sake; neither will I again smite any more every living thing as I have done. While the earth remaineth, seedtime and harvest, cold and heat, summer and winter, and day and night shall not cease. And God spake unto Noah and his sons with him, saying, Behold I establish my covenant with you, and with your seed after you; neither shall all flesh be cut off any more by the waters of a flood; neither shall there be any more a flood to destroy the earth. And God said, This is the token of the covenant which I make between me and you and every living creature that is with you, for perpetual generations; I do set my bow in the cloud, and it shall be for a token of a covenant between me and the earth.

Now we have in this brief passage taken from the Book of Genesis a description of a scene which occurred many thousand years ago and at the very opening of history, and at the same time a reference to objects of nature, religious customs and various symbols

which are familiar at the present time, all of which serve as witnesses of the truthfulness of the record.

The story of the flood and of the scene on the mountain top has been often doubted, and much discussion about it has continued to the present day, yet the witnesses are all often before our eyes, and their testimony is certainly unimpeachable. There is perhaps no event which is confirmed by so many traditions of the nations of the earth than this very deluge. There is no scene described in the Bible which has more evidence as to its correctness and therefore we may take it as a test case. Three kingdoms unite together in giving their evidence. The kingdom of nature in the bow, the religious customs and beliefs embodied in the altar, the records of history preserve to us the testimony of the ancient people.



THE BOW IN THE SKY.

Let us take the bow in the cloud. It will be acknowledged that it was not the first time that a rainbow had been seen, but it was the first rainbow which had been attended with such a promise. The combination of the bow with the altar is also very significant and both of them are emblems and pledges of the sacredness and in-lability of the covenant. These witnesses confirm one another—nesses which are still giving their testimony.

We may picture the scene and find evidence in the altar or get encouragement from the words. The bow in the cloud was a symbol to Noah as it may be to all who have the eye to interpret the laws of nature. We do not need to hesitate in taking God at his word. The supernatural is to many minds supposed to be a matter of superstition and some make natural laws their only object of study, but the relation in which God stands to those laws is like the writer of a book who may not be seen or heard, but God's thoughts are blazoned out before the eye, even when unassisted by the instruments which man has invented. We may place ourselves in the position of that little band upon the mountain-top, who looked out upon the world which had been swept by the flood. They looked up to the sky and saw the many colored bow and it became to them a token of God's care, for the natural and the supernatural worked together, to show his love. The glory of God is shown when he speaks in material creation as well as in the written word. There is sometimes a hidden light, both in the written and unwritten word. If it is not recognized, it is because the inner eye is defective, a veil is before the mind's eye.

"The word of the supreme being produces its effects because it comes from the truth, but not all have interpreted it alike. The religions of the Jew and the Christian alone have been guided by the divine light to find the clue. The ancient Aryans had observed the struggle chiefly in the physical phenomena, and, not unnaturally, likened them to the strife between good and evil. Zoroaster applied this idea to the moral and metaphysical arrangements of the universe, and it became the basis of his system of dualism. He admitted the existence of an opposing principle against whom Ormuzd had constantly to contend to found his empire, a principle equal in power and intelligence to himself. The evil spirit Ahriman, like Ormuzd, had been eternal in the past. He had no beginning and had proceeded from no former being. This, however, destroys all progress in the moral government of the world. In other words there is no end to the contest between good and evil; no hope for man; no real progress, even of creation; no kingdom of redemption, but an eternal conflict. No one is the victor." This, however, is not the system contained in the word revealed.

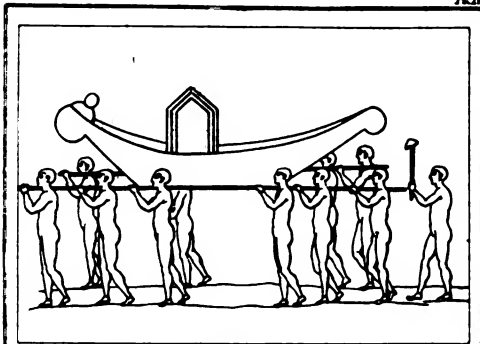
The Duke of Argyle says: "It must always be remembered that the two ideas, that of a physical cause and of a mental purpose, are not antagonistic, only the one is larger and more comprehensive than the other." The Bible gives us a higher view than any that has come to us from paganism. It is an unseen hand that stretches the bow across the sky and makes it a symbol of safety to all that believe.

The ark itself was a symbol. "By faith Noah, being warned of God of things not seen as yet, moved with fear, prepared an ark to the saving of his household; by the which he condemned the world, and became heir of the righteousness which is by faith." It

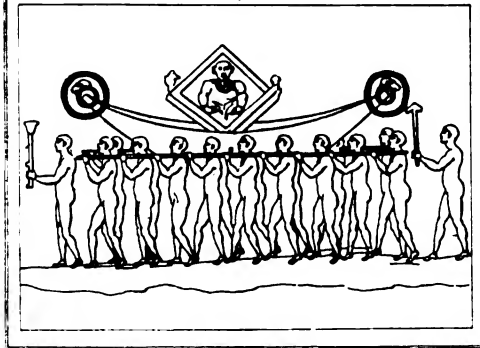
required faith to build the ark and so it may require faith to see the significance of the ark.

The history of mythology is suggestive of the worship of the nature powers, but it teaches very little of the existence of the God of nature. On the other hand the Bible is always teaching us about

God's providence. In the garden he appeared as a voice—the voice of a father, and rebuked the first pair for their want of faith and for their disobedience. He appeared again, to the two brothers who came bringing their offerings, and rebuked the wrong spirit which Cain manifested, and commended Abel for his obedience and faith. He came again to the altar around which Noah and his family were gathered, and, after lifting up the arch of triumph in the sky, he made his promise to those who had obeyed his word and trusted his care. The ark itself was significant, for it was a symbol of a home to those who had been obedient and entered its sacred doors. The dove which brought back the



The Ship of Ius Diphora with an Ark.



The Ship of Ius and Image. From Bruch's Account of Egypt, p. 111.

THE ARK OF THE EGYPTIANS.

green bough was an emblem of purity and faith. And so there may be even at the present day a white-winged dove hovering about our homes. The narrative is a remarkable one and harmonizes with the view of God which is everywhere found in the scriptures. There is an old engraving in Bryant's "Mythology" which represents the ark upon a quiet sea, with the rainbow forming an arch in the sky, while a white-winged dove brings the olive branch in its bill. Every part of the picture is significant of peace and safety. The storms have passed away, the floods have subsided, calm has rested down on the scene, and God's care is everywhere manifested. (See cut.) How great is the contrast between this picture and the view of the flood with its stormy waters and dark clouds, and men struggling everywhere with the waves, many clinging to the rocks and the

mountain sides, but disappearing one after the other until the destructive forces have lost their power, and everything in nature has become "waste and void." There is a lesson suggested by this picture, which is in accord with the scene upon the mountain top where the survivors gather around the altar and listen while God gave his promise to them. We know not how the word came to them;—whether it was a voice from out the sky or an inward revelation which enabled them to interpret the bow which lifted its arch above the mountain top. Its fulfilment has been repeated throughout all generations. We find in Pagan myths many reminders of this scene upon the mountain which is so graphically described in the Bible.

The Hindus have a legend that the ocean was churned by placing the mountain on the back of a turtle and using it as a drill. The divinities stood opposite to one another pulling the serpent which was used as a rope and by this means churned from the depth of the water the sacred soma, or the element of life. In the mysteries of the Cabiri every dynasty ended with destruction. All men were destroyed except Menu or the ruler. Menu escaped in a vessel bound with a sea serpent, and became the great teacher of the people. Menwidd, the Welsh hero, sailed through the waters enclosed in the curvatures of the vessel Kydd, the forepart of which was stored with corn, but bound with the curved serpent. The Chinese have a tradition that there were ten periods before the flood but after the flood the throne of Fohi was established which was called the rainbow throne, for there were rainbow arches above it.

The first sovereign in Britany sailed in a wonderful ship, which moved without sails. His sanctuary was an island surrounded by a wide lake. It was called "the rock of supreme power," "the place of tranquility." Here he dwelt secure, having the rainbow for his girdle but presiding over the ship with the iron door which once rested on the summit of a lofty mountain. The Celts say that their great chief constructed a ship which had the form and name of the goddess Ceridwen. The Peruvians have a story that their Viracocha emerged from the Lake Titicaca, and found refuge on a small island. The Navajoes have the story that they came up through three caves, one above the other and entered into a beautiful valley surrounded by mountains but a stream which was connected with the sea, burst through the hole through which they



THE BOAT OF OSIRIS.

emerged from the Lake Titicaca, and found refuge on a small island. The Navajoes have the story that they came up through three caves, one above the other and entered into a beautiful valley surrounded by mountains but a stream which was connected with the sea, burst through the hole through which they

emerged and filled the valley with a flood. The divinity, however, spanned the valley with two rainbows which crossed one another at right angles. After this the water retired, and the people made their permanent homes in the valley. The Greeks have a story that Latona, pursued by the serpent Pytho, took refuge in the floating island Delos. In the Egyptian mythology Isis was pursued by the monster Typho, but she fled with the youthful Horus to an island which floated in a lake near Buto. The Hindus hold that a symbol of the ship is the lotus, that the calyx is the vessel itself, and the petals represent the pilot. Among the Hindus the ark was also symbolized by an image named Durga which was cast into the Ganges. They say Siva was within the womb of the ship during the prevalence of the flood, but afterwards was conspicuous on the summit of Mt. Meru.

Inachus was the first civilizer, the first navigator, the first ploughman and the first legislator.

The Mexicans have a story of the rainbow as follows: The goddess Mixtli was walking in the court of the temple, when she beheld a plume descending from heaven, bright with the hue of the rainbow. After this she became the mother of the chief divinity.

The Hindus, as well as the Egyptians, carried certain vessels in their sacred rites which were evidently intended to represent the ark which bore the family of Noah.

The lunar boat was a common symbol, as common as was the lotus among the Hindus. A mountain also figures conspicuously in tradition, reminding us of Ararat. Mt. Meru is often mentioned by the Hindus. Stone temples were constructed in the precise form of the ship among the Celts. According to Iamblichus, the ship symbolized the great physical evolutions.

The name of Noah is significant in this connection, for similar names are found in all lands and are the names of the first ancestors and great king. In Greece the names Inachus, Argos, and Cronus are found, in Egypt Osiris, in Persia Mithras, in Peru Veracocha, in China Fohi. These names differ from the first law givers, but they are significant as they represent the earliest kings and first ancestors. It is a question worthy of notice whether these names originated in each land separately or whether they were transmitted from the starting point of Mt. Ararat. It is, however, interesting to know that the most of them were the names of navigators as well as ancestors.

Arks or Boats were frequently mentioned in Egyptian mythology. Plutarch describes Osiris as going into his ark to avoid the fury of Typho. There were two festivals observed by the Egyptians in opposite parts of the year, the one representing the fastening of in his tomb, when the nights grew long and the winter came, the other in the spring when the Nile overflowed its banks. At this time the image of Osiris was cremated and it was the custom to go in search of him. In another season they were accustomed to carry the sacred vessel to the sea and then pour

some of the river water into it, at which a shout of joy was raised as if Osiris was found. In this way the nation symbolized the operations of nature as well as the events of history.

There were also women among the guides which became significant. Oannes was a man of the sea. This name became afterwards quite common and is in the Bible given as the name of the Prophet Jonah.

Throughout the east the argonauts are said to have sent out a dove, to see whether the passage through a dangerous part of the sea was safe. Deucalion is said to have settled where the dove lighted. The very fact that the Eleusinian mysteries were brought to Greece from Egypt is significant. In Egypt vessels were carried in processions. It appears from the study of the Pagan myths that they nearly all hark back to the record given in the book of Genesis and many of them even to the times of Noah. To illustrate: the ship Argo was a vessel in which the Argonauts made their famous voyage. One interpretation of this myth is that the story was modified to suit the demands of the Greeks, the ancestors of the Greeks having passed through the same general experience. Eratosthenes claimed that the ship Argo was the first one ever built. It was also the first one that ventured upon the sea. It was built at the very beginning of time and was an oracular vessel. It was after placed in the heavens as a constellation or sign.

Plutarch maintained that the constellation which the Greeks called Argo was the sacred ship of Osiris. Another author says that Juno gave a commission to build the ship Argo to Minos out of regard to Jason. The Romans made a distinction between Janus and Saturn. Saturn was regarded by some as the son of Oceanus and by others as Cœlus, or the sky. He was looked upon as the author of time. He was represented as holding in his hand a serpent, whose tail was in its mouth, and so formed a circle. Inachus was regarded as the "father of gods and men," and at the same time, as the author of peace and rest. He was the Poseidon of the Greeks, and was figured under the name of Dionysus, according to Greek mythology was exposed in an ark and was wonderfully preserved. His history is closely connected with that of Bacchus. He taught the nations to build and to plant. He gave them laws. He also taught them to plant the vine, and to extract the juice of the grape. Mt. Meru was the place of his birth. Inachus was another of the Greek heroes who can be identified with Noah.

The figures represent the symbols of the Egyptians and are suggestive of the strange superstitions which prevailed. But nowhere do we see the people worshipping God and nothing to show that there was a faith in a personal God. Another engraving is taken from the history of the heavens, compared with the doctrines of Moses, by the Abbe Pluche. In this the gods of the Egyptians are represented with their various symbols. The Nile

key, and the Lotus in the hands. One goddess has the beak of a bird for a headdress. The figure of the Asp is conspicuous. Another divinity is represented with the head of an ape. The cut represents the symbols of the divinities and illustrates the system of religion which prevailed in Egypt.

One of them represented the goddess Osiris, the other Thoth. There are other figures which represent gods and goddesses with the disk of the sun and the moon above the head, showing that the Egyptians worshipped the heavenly bodies and animals and deified human beings, but had no conception of a personal God ruling above such as is taught in the Bible. The ram became the beloved animal of the inhabitants of Thebes, the ox and the cow became the favorite animals of Memphis. The ram and the goat were the favorite of other cities. The measure of the Nile in the hand was called the Nile key and was generally carried in the hands, sometimes a weaver's beam a distaff or a lance was made the symbol of the divinity. In this way the common employments were associated with religious symbols, and the plants, and animals, heavenly bodies, such as the sun and moon were associated together in their religious beliefs and ceremonies. We cannot regard these as marking an early stage of religious development for they continued to be prominent in the religion of Egypt long after the opening of history, even in the palmy days.

This is in contrast to the teachings of the Bible.

In Genesis the following is written, "God said, let us make man in our image, after our likeness, and let them have dominion over the fish of the sea, and over the fowl of the air, and over the cattle, and over all the earth, and over every creeping thing that creepeth upon the earth. So God created man in his own image, in the image of God created he him; male and female created he them. According to this passage there was a progress from the reptile to the beasts and birds, and from these to man who was made to be supreme, but the Pagan systems of religion have made man in a sense subordinate to the brute creatures for human sacrifices were offered to the divinities of the sky, and even animals were kept in the temples as embodiments of the divinity.

The main question now is whether the system of religion contained in the Bible was a development from the various systems which prevailed among the Pagan nations. The belief has been that God revealed himself to the patriarchs of old, and that there was a continued progress in his revelation until the time of the advent of Christ. The apostles then took up the torch of truth, and that the New Testament contains the foundations for the Christian religions which seems to be destined to supplant and take the place of heathenism. There seems to be arising, however, a belief that this is a mistake and the tendency now is to put the Bible on a level with other books. It is only the result of religious development and has no particular authority as the word of God.

II. The narrative in Genesis gives to us an account of the origin of sacrifice. The Abbe de Pluche says:

"We see Noah at his coming out of the ark, doubtless according to the usage common before the flood which goes back to the very sacrifice of Abel. We see the patriarchs long before Moses burying their dead in an honorable manner. Jacob, without being acquainted with the Egyptian customs, testifies his gratitude for the promise which God had made to him in his dreams by setting up a stone in the very place where God had made the promise to him, and consecrated it as Bethel to his God. Prayers, offerings, consecrations, libations, sacrifices, are found among the patriarchs before Moses, and among such nations as had never heard of him because they proceed from the Scriptures which lead us to the origin of things by showing us the unity of all nations in one single primitive family the true reason of the resemblance of their religious practices.

The sacrifice of Abel consisted of that of an animal. "The institution of animal sacrifice was coeval with the fall, and had reference to the sacrifice of our redemption. It appears to have been ordained as a standing memorial of the death introduced by sin, and of the death which was to be suffered by the redeemer."*

The Mosaic account of the creation, the fall, and the expulsion from Paradise is, supplemented by the account of the deluge, but the sacrifice which was offered by Noah was attended by a promise of which the bow in the cloud was and is a symbol. The sacrifice made by Abel near the garden of Eden and the sacrifice by Noah on the mountain of Ararat have this element in common that God was present and added his blessing. God had respect to Abel and his offering but for the sacrifice of Noah he lifted up the Bow in the sky. That gathering on the mountain top is significant. Noah and his entire family were present and gathered about the altar, and were full of gratitude to God for his deliverance. They looked downward and saw that the waters had been assuaged and the green trees were full of buds and blossoms. They looked upward and saw the Bow in the sky. One answered to the other, and they were both full of promise for the future. To those who believe in God's



ALTAR OF SACRIFICE.

*Magee on the Atonement. Pp. 47-55.

promise and trust his word there is a similar vision and a brighter hope. They trust that in the sweet fields of Eden there shall be another gathering where all who belong to the family of the faithful shall have visions which are in fulfilment of the promise. God's covenant with Noah meant something more than material good.

How different was a sacrifice by Noah on the mountain from that which was common among the pagans. According to Homer the deities feasted on the hecatombs of oxen. The Greeks poured the sacrificial blood over the flesh. The Hebrews poured it out at



THE ALTAR OF SACRIFICE NEAR PETRA.

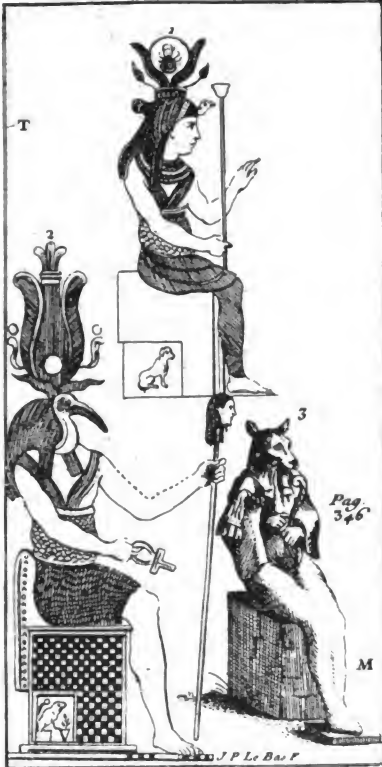
the base of the altar. In the one case it was offering a carnal feast to the divinities; in the other it was offering a sacrifice of atonement, more properly at-one-ment. In the Psalms we read: "Will I eat the flesh of bulls, or drink the blood of goats?" God sent the ravens with flesh to Elijah, but needs no flesh for himself.

There are engravings which represent the altars which were common in early days and venerable personages near the altars which might be taken as representing the patriarch Noah. The resemblance suggesting that the tradition contained in the Bible was known at an early date among the Pagan nations. There are also engravings which represent the boats floating in the water with figures in the boats, which have a royal bearing. These represent the gods

of the Egyptians. Certain stories have been traced out in Egypt recently which seem to indicate that there was a tradition of the flood even in this land. It should be said also that engravings or etchings of boats have recently been discovered in Egypt which are so rude as to suggest that they are boats that were common before the time of the flood.

Another point is worthy of notice, however. There were many ceremonies in Egypt in which the bearing of a boat with a sort of ark above the boat was an important part of the religious ceremonies. (See cuts.)

There was a natural kinship between Jehovah and Israel, and the sacrifice was an emblem of the covenant of God. The presence of God was felt at the family feast, and he made himself known as a covenant-keeping God. There were many visions connected with sacrifices, and a promise always attended the vision. Noah upon the mountain top gained a vision of the bow in the cloud, and God made the promise that there should be no other flood. Abraham made a sacrifice in the plain, and he brought forth the furniture from his tent, the burning lamp and the smoking furnace, and God bade him look up to the sky and count the stars, and made the promise to him that his seed should be



1. Cerce, ou Isis avec le Coq entre deux cornes de Lotus et deux feuilles de Persim, portant de plus sur sa tête le Symbole d'un vent, La mesure du Nil en main, et ayant sous son bras la Corne de l'Amour. 2. L'Isis à tête de Cigogne. 3. L'Osiris à tête de Loup. pour la Page 346

THE GODS OF THE EGYPTIANS.

as the stars in number. Jacob also awoke from his dreams and gained a glimpse of the mountains. They were transformed into a ladder which reached the heavens with angels descending and ascending upon it. The angel appeared to Manoah, the father of Sampson, and Manoah erected an altar and offered a sacrifice, and the angel made the promise to Manoah and his wife that a child should be given to them, a child that should be a judge in Israel. God tested Abraham and he endured the test, showing a devotion as absolute as that of the pagans, for he was willing to sacrifice even his son Isaac, the child of his old age. At the same time the loving kindness of God was exhibited as infinitely superior to the spirit of the pagan divinities, for he intervened before the act was completed, forbidding the sacrifice itself. A ram

caught in the thicket, was sacrificed instead of Isaac, and the divine requirement was fully satisfied.

When the children of Israel had ceased their wandering and had encamped in the plains near the mountains of Moab, Balak, the King of Moab, sent for the prophet Balaam, to come and curse the people. Three separate times an altar was erected and offerings were made, but Balaam was overruled by a higher power and the curse was overruled by a higher power and the curse each time was turned to a blessing, until the King exclaimed, "Neither curse nor bless them at all." This sacrifice was on the mountain, the same as the others mentioned in the Bible. It is worthy of notice, however, that high places were used by the Pagans as well as by the patriarchs as place of sacrifice.

In the sacrifice which was made by the prophet Elijah when he was contending with the priests of Baal, he gained a great victory over the priests, for the fire descended from heaven and consumed the sacrifice and even licked up the water which had been thrown around the altar. The history of sacrifices is worthy of study, for we find great contrast between the sacrifice described in the Bible and those which were common in Pagan nations. It appears that nearly all Pagan nations were in the habit of sacrificing human beings, apparently thinking that the blood that flowed from such victims was acceptable to their divinities. Those who are familiar with the accounts given by the early conquests of Mexico, will remember how human victims were led up to the summit of the pyramids and stretched upon the altars, and were sacrificed there. The heart was torn out and thrown into the face of the idol which represented the sun. The body was thrown down the side of the pyramid, and was seized by the people, who fed on them in their barbarous feasts. Altars have recently been discovered among the mountains just above the ancient city of Petra and with the altars are circular levers, obelisks and other objects showing that it was a sacred place to the ancient people who lived in this region. The contrast between the Pagan and the worshippers of the true God is illustrated by the great difference in their sacrifices.

III. It was in connection with the sacrifice on the mountain that God was revealed as a covenant-keeping God, and the bow in the cloud was made a sign of the covenant. It was also in connection with the sacrifice by Abraham on Mount Moriah that the Abrahamic covenant was made, a covenant which was continued throughout Old Testament times and renewed in Christ, whose blood was the seal of the New Testament. In this we find a contrast again between the Bible story and pagan mythology. Aeschylus says it was the Titan Prometheus, the brother of Atlas, who revealed to men the rising and setting of the stars as a means whereby they may have a sure sign of stormy winter, flowery spring, and fruitful summer. Prometheus invented letters and numbers, the steed-drawn chariot, ships, and arts of divination. In fact all arts are from Prometheus. But Prometheus was doomed to suffering. The Babylonian story

is that a divinity brought the lightning, the fire from heaven, from the gods to man, but, like Prometheus, he was an outcast from the gods. This shows that according to the mythology of Babylonia and Greece, the benefactors of primitive humanity, were bound to suffer. In the Euphratean myth we find a story of rebellion. For Eabani, who once ruled in the upper world, was doomed to sit on a throne in Hades, among the shades of the old time. He reminds us of the Homeric gods who were gathered around Cronus and rebelled. These Titans, as they were called, were sent below to Tartarus. According to Berosus several of the Babylonian cities were built before the flood, and various arts were known, including writing. The details given in the inscriptions leave no doubt that the account in the Bible and the Babylonian story relate to the same event. The flood became a new starting point for the world in both histories.

According to the Bible there was one God of the universe, not many, and this one has revealed himself to his people as their father. The Lord appeared to Noah to comfort him and his family. Josephus tells us that Noah was afraid lest God should drown the earth every year, and so he offered burnt offerings and besought God that nature might go on its orderly course, and God acceded to his request. He said, "If I shall at any time send tempests of rain in an extraordinary manner be not afraid of the largeness of the showers; for the water shall no more overspread the earth. But I will give you a sign that I have left off my anger by my bow that shall appear in the cloud." This interpretation has come down to us through the ages, and the rainbow is always accepted as a symbol of God's mercy and constant favor, even in times of sorrow.

IV. The contrast between the pagan divinities and Jehovah is thus manifest. According to the Babylonian account, Xisuthrus, the great ancestor of the human race—the Noah of the Pagans—was translated for his piety and dwelt with the gods; but Izdubar had a dream and wandered into the regions where gigantic monsters had control. From them Izdubar learned the road to the region of the blessed. Izdubar found a brother named Hea, who undertook to navigate the sea of air to the region where Xisuthrus dwelt. Coming near to the dwelling of the blessed he had to cross the water of death to reach the land of the beyond. On arriving on the other side Izdubar was met by Urhamsi at daybreak. He described the deluge but was cured of the illness, and returns and finds that after intercession with the gods the ghost of Ea Bani, his friend, had arisen from the ground in which his body had lain. This is the first hint coming to us from the pagans as to their belief in the resurrection and a future life, but it is supposed to belong to a later age than that of Noah.

The sacrifices were nearly generally attended with visions and promises from God which corresponded with the bow in the cloud.

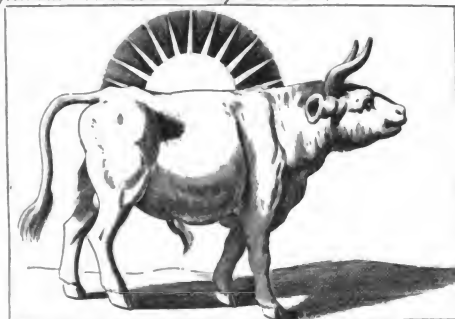
How great is the contrast between these various Bible stories and the pagan traditions and myths. It is claimed by some that we

have the same names in pagan mythology that we find in the Bible. Japheth, one of the sons of Noah, reappears in Iapetus, who was the father of Prometheus. But if this were true the history of Prometheus was very different from that of the sons of Japheth. Prometheus was bound to the rock and defied the gods, and suffered because of his defiance. It is true that the spirit of revolt and defiance of God appeared at the tower of Babel; but as a result the people were scattered and lost their inheritance.

Various ORIENTAL SYMBOLS allusive to the SOLAR ORB, the BULL, the LION, the EAGLE, and the SERPENT, so conspicuous in the MYTHOLOGY of the Ancients.



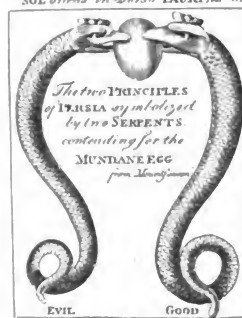
SOL ORIO IN DORSO LEONIS



SOL ORIO IN DORSO TAURI, ac nomen Anglonibus, from Hyde



The APIS or SACRED BULL of EGYPT, with priests offering up sacrifice, from Dr. MERCAUTIA.



EVIL

GOOD



SOLIS AVITULA GERANS SOLEM, from Hyde

OBJECTS WORSHIPPED BY PAGAN NATIONS.

The kinship between Jehovah and Israel was embodied in the covenant, but two symbols were very expressive. The one was the bow in the cloud, and the other was the altar of sacrifice. In the oldest pastoral or shepherd mode of life sacrifices were common. The herd possessed a sanctity on this account. The sheep and goats were regarded as kinsmen and were called by name. (Human sacrifices afterwards came into vogue.) They were offered by the heathen, but were condemned by the patriarchs and by the Mosaic law. In Judges it is related that Gideon made an offering under an oak tree, and the angel of God appeared and touched the altar and there rose up fire out of the rock and consumed it. "And when Gideon perceived that he was an angel of the Lord he said, 'Alas, O Lord God! because I have seen an angel of the Lord face to face.'

And the Lord said unto him, 'Peace be unto thee; fear not: thou shalt not die.'" Thus we find a great contrast between the sacrifices offered to the unseen God and the human sacrifices which were offered to the heathen divinities. Before the departure of the Israelites from Egypt the lamb was taken and the blood was sprinkled on the door posts of the houses, and became a sign to the angel of death who was to enter the houses of the Egyptians and destroy their firstborn. It was the symbol of safety, exactly as the sacrifice by Noah upon the mountain top was to his family.

There was no such covenant, as is recorded in the old and new testament, known to any of the Pagan nations, each nation had its own methods of worship, its own divinities, which were generally the personifications of the nature powers, and its own system of sacrifices. The priests were in reality the officials, who offered sacrifices, and their great effort was to inspire the people with a sense of terror. The high places were covered with altars, and human victims were often offered upon them. The animals were in reality nearer the nature powers than were the people themselves, and they had a sense of security while the people were full of terror.

The symbols of the heathen nations are very suggestive for they illustrate the strange superstitions which prevailed and show that there was no faith in a personal God. The people were full of terror. In fact, the religion of the Pagans, perpetuated the reign of terror. There is an engraving in Maurices antiquities which illustrates this point. In it is the ox, and a lion, and in the background the disk of the sun, with rays projecting, beside these two figures there is an eagle in front of a goddess whose head is surrounded by a glowing nimbus also a sacred ox to which priests are offering sacrifices, above the bull is the winged circle. In the middle of the picture are two serpents holding aloft the cosmic egg.

The history of navigation is traced back to these heroes, and this forms another connecting link. Cronus was a universal benefactor, who reclaimed men from their savage way of life. Oranus, the king of Atlantis, found man in a barbarous state, but set about building cities. All of these myths seem to point to the same person, namely Noah, who was the first navigator and the first tiller of the soil, and was supposed to be the first one to build cities.

Recent discoveries in Babylonia have carried back the date of civilization many thousands of years, but they do not overthrow the tradition of the flood nor refute the story of Noah and his family. In fact the very differences which have been found between the races which first occupied the valley of the Tigris show that we have no particular record of their migration, except as that which is contained in the disruption of the Tower of Babel and the confusion of tongues, but the evidence is that the three sons became the ancestors of the three great races which

were scattered and became the inhabitants of three great continents.

There are particular incidents in connection with mythology which confirm the idea that the Bible account is true in all particulars. We may take the story of the dove as an illustration. The story of the dove is common.

The story of the three sons of Noah is correct. They have been often regarded as identical with the divinities which were worshipped by the Pagans under other names. The tendency was among all the early races to elevate their first ancestor to a level with the gods. In this way we have ethnic divinities which are in reality only the human ancestors of the different races which have been exalted to the sky and worshipped as the gods.

The fact that the descendants of the different sons of Noah migrated from the very region where Noah and his three sons first settled and made new homes for themselves, and developed separately from one another furnishes a confirmation for the Scripture account. In other words, they were arks. They were sacred and significant. The Greeks borrowed their mysteries from the Egyptians, but always in celebrating the mysteries approached the sea.

The list of the descendants of Noah is given in the tenth chapter of Genesis. It contains the names of many of the ancient races who settled in and around Mesopotamia and gradually became scattered until they reached the remote portions of the Asiatic continent. This chapter has not been refuted by any of the studies of the ethnologists, has been confirmed by the testimony of the monuments. The wonder is that it should have been placed between the story of the landing of the ark and that of the building up of the tower of Babel and the confusion of tongues. It is a calogen which can bear the test of time and proves that the writer who recorded it knew about the facts. The evidence is that Noah and his three sons became exalted as great heroes by the ancient people and were afterwards worshipped as divinities. Ovid distinguishes between the giants and the gods. The giants or Titans were the deities who fled, but the gods were the patriarchs who were deified, though they bore another name.

SOCIOLOGY OF ABORIGINAL TRIBES IN AUSTRALIA.

BY R. H. MATHEWS, L.S.

Corres. Memb. Anthropol. Soc., Washington.

Introduction.

So little of a definite and accurate character has yet been published on the sociology of the aboriginal tribes of Australia that I have prepared the following short article dealing with this important and interesting subject.

I shall commence with the sociology of the Kurnu tribe, which is quite new to aboriginal literature. Some additional facts respecting the sociology of the Kamilaroi and some Victorian tribes will be used for purposes of comparison and reference. A fairly exhaustive account, within a small space, is given regarding the marriage laws and succession of the totems in the Warramunga tribe in Central Australia.

I was the first author to publish the divisions which I have denominated "Blood" and "Shade" respectively in any Australian tribe.* It has now fallen to my lot to be the first writer to report that exogamy has no existence in any of the Australian tribes which have been studied by me.

This article will revolutionize or completely dispel all the antiquated notions of previous writers regarding exogamy and sociology, at least as far as the aboriginal tribes of Australia are concerned and enable investigators to make a fresh start.

The information regarding the Warramunga tribes has been obtained by me from several independent correspondents who have resided in the country of the Warramunga for many years. All the details respecting the Kurnu, Kamilaroi and Victoria tribes have been gathered by myself in the camps of the natives.

In studying the sociology of the aboriginal tribes of Australia we are at once struck with the number of subdivisions of the people, which intermarry one with the other in accordance with recognized laws. The natives of some tracts of country are segregated into two parts or phratries. In other localities there is a bisection of each phratry, making four divisions of the tribe. Among the inhabitants of other districts there are four subdivisions of each phratry, giving a total of eight sections. But whether there are two, or four, or eight partitions of the community, the fundamental principles governing the intermarriages are the same in them all.

In tabulating the names of the subdivisions and trying to discover some uniform order of succession amongst them, it is found that

* Journ. Roy. Soc. N. S. Wales, Vol. XXXVIII, pp. 209-215.

the women of any tribe can be classified into two distinct sets or cycles, the members of a cycle reproducing each other continually in an established order. It is immaterial whether there are two or four or eight subdivisions, they are subject to the same law. If we take an example from the Warramonga tribe, Table IV, *infra*, we see that Nungulli is the daughter of Napun Kadi, who is the daughter of Narulla, who is the daughter of Nulcherri, who is the daughter of Nungulli, which is the name with which we commenced the series. The order given in this series is absolutely invariable; any other order of succession of these four sections of women is out of the question.

But if we attempt to find any infallible law of succession among the men, we are disappointed. For example, taking Chapulcherri, the first name in the "Son" column of Table IV, although his mother is always Nungulli, his father might belong to any one of four sections, depending upon whom his mother had married. Hence there cannot possibly be any recurrent succession of the sections through the men.

Although there are so many nominal divisions, called by various names, they do not break the tribe up into small independent detachments. On the contrary we discover that the individuals belonging to any cycle, phratry, section, or totem, do not collect into certain localities by themselves, separate from the rest, but are dispersed indiscriminately throughout the whole Aribal territory in such a manner that members of every section are found in all the hunting grounds of the tribe. It is indeed possible for all the sections and totems in the community to be represented in the same locality.

Notwithstanding the apparent complexity of the intermarriages between the various sections, the matter is simpler than it looks. In studying the marriage laws explained later on, the reader will be able to deduce that the matrimonial alliances are really between the grandchildren of a brother and the grandchildren of his sister, whether in the Kurnu, Kamilaroi, Warramonga or Victorian tribes. This relationship is not, however, so uniform or definite among the natives as it is among Europeans, in consequence of the custom in all Australian tribes, that a man looks upon his brother's children in practically the same light as his own, and a woman takes a similar view of her sister's children.

The extent of country occupied by the aboriginal tribes possessing the three varieties of organization described in the following pages comprises about two-thirds of the entire area of the mainland of Australia. The Kurnu and Kamilaroi variety of sociology consisting of four subdivisions of the community, extends over about two-thirds of New South Wales, the greater part of Queensland, a wide zone through the center of South Australia, and more than half of Western Australia.

The organization represented by Table III, where the tribe comprises only two divisions, covers the greater part of Victoria, about

one-third of New South Wales, and portions of Queensland. The Warramonga variety, containing eight subdivisions, as in Table IV. is representative of the sociology of the tribes scattered over an immense region in the Northern Territory, reaching northward from Alice Springs to Katherine river, and extending westerly from the Gregory river in Queensland, through the Northern Territory, as far as the Ord and Fitzroy rivers in Western Australia.*

SOCIOLOGY OF THE KURNU TRIBE.

The following is a short description of the sociology of the Kurnu† natives, located on the Darling river, in New South Wales. This tribe occupies both sides of the river from about Bourke downwards to Winbar station, and extending back both northwards and southwards into the hinterland of the Darling for long distances. Their country also reaches up the Warrego river as far as Ford's Bridge, a small village situated on that river.

The community is divided socially into two primary phratries or moieties or groups, whichever of these names we choose to employ for purposes of distinction. These two divisions are named Mukkungurra and Kilpungurra, with their feminine equivalents Mukkungurraga and Kilpungurraga. The Mukkungurra phratry is again divided into two sections called Murruri and Kubburi; and the Kilpungurra phratry into two, called Ibburi and Ngumburi. In each of these four sections the names of the women are modified so as to distinguish them from those of the men. The following table exhibits the masculine and feminine forms of each section name, what sections can intermarry, and the section name of the resulting offspring.

TABLE I.

Phratry.	Husband.	Wife	Son.	Daughter.
Mukkungurra	Murruri	Ibbundyerra	Ibburi	Ibbundyerra
Kilpungurra	Kubburi	Ngummundyerra	Ngumburi	Ngummundyerra
	Ibburi	Kubbundyerra	Murruri	Murrundyerra
	Ngumburi	Murrundyerra	Kubburi	Kubbundyerra

The above table gives the phratry, husband, wife, son and daughter on the same line across the page and requires no further explanation.

Besides the partition of the community into phratries and sections as just explained, there is a further subdivision of the people into lesser groups, which bear the names of different animals, plants or inanimate objects, to which the name of "totems" has been given by anthropologists in America and Europe.

Again, each phratry, as well as the sections of which it is composed, possesses a further distinctive division into Muggulu and Ngipuru, meaning sluggish blood and swift blood respectively. These segments may, for convenience of reference, be called "blood divisions."

* American Anthropologist, Vol. 2 N. S., pp. 185-187 and pp. 494-501, with map showing geographic distribution of the Tribes.

† Language des Kurnu, etc., Bull. Soc. d'Anthrop. de Paris, Tome V, Serie V, pp. 133-139.

For the Initiation Ceremonies of the Kurnu, see my article in Mittell. d'Anthrop. Gesellsch. in Wien, Bd. XXXIV, pp. 77-83.

There is still another repartition of the community, which can be distinguished as "shade divisions." These divisions are in reality an extension of the "blood" castes, and regulate the camping or resting of the people under the shades of large trees in the vicinity of water or elsewhere. For example, when a few friendly families, or a party of hunters, are resting under the shade of a tree, the people who belong to the Muggulu "blood division" sit down in the shadow thrown by the butt or lower portion of the tree. The Ngipuru people sit down to rest in the shadow cast by the higher branches of the tree. The Ngipuru folk, who occupy the outer margin of the shade, are supposed to keep a strict watch for any game which may appear in sight, the approach of enemies or friends, or anything which may demand vigilance in a native camp.

The phratries and sections intermarry as follows: A man of the Mukkungurra phratry and Murruri section marries a Kilpungurra woman of the Ngumundyerra section. The children follow the Kilpungurra phratry the same as their mother, but they do not bear the name of her section. They are Ibburis and Ibbundyerras, being the supplementary section of their mother's phratry. (See Table.) And the progeny, boys and girls alike, inherit the totem of their female parent; thus, if the mother be a padamellin, so will the children.

The castes or divisions of "blood" and "shade" must be taken into account in arranging the betrothals and marriages, and also in tracing the pedigree of the progeny. A man of the Muggulu "blood" and the Butt "shade" marries a Ngipuru woman of the Branch "shade." In regard to the offspring, a Muggulu mother produces Muggulu children, who take their mother's Butt "shade." A Ngipuru mother produces Ngipuru children belonging to the Branch "shade."

The castes of "blood" and "shade" are not necessarily coincident with the other divisions. For example, a Ngipuru man or woman may belong to either phratry or to any section; and a Muggulu individual has the same scope.

As an evidence of the importance attached to the "blood" divisions, they are brought into prominence at the scarring of the bodies of the young men during the initiation ceremonies. A Muggulu youth has his shoulders and chest marked with shorter scars, whilst a Ngipuru youth has longer scars, to distinguish one from the other. See my "Mumbirbirri or Scarring the Body."*

The phratries, sections, totems, and the castes of blood and shade above described, are used in tracing out the pedigree of the parties to a matrimonial alliance. Upon this foundation, the actual marriages are regulated by a system of betrothals, which are made after a child is born, and not infrequently before that event. For example, they wish to determine what woman will be the proper wife for a boy A. The old men know who is the mother of A, whom we shall designate B. From this they find C, the father of B, or A's

* Journ. Roy. Soc. N. S. Wales, Vol. XXXVIII, p. 262 sq.

grandfather in the maternal line. Next they discuss who was a sister of C, whom we shall designate D. Then, a daughter of one of D's daughters will be the correct wife for A.

In such cases, therefore, a brother's daughter's son mates with a sister's daughter's daughter. This constitutes the normal or direct rule of marriage; for example, a Murruri marries Ngumundyerra as in Table I. But if C's daughter's son be allotted a spouse who is D's son's daughter, this is the union which may be distinguished as indirect—that is, Murruri marries Murrundyerra. In the former case Murruri marries a woman of the opposite phratry, but in the latter case he takes a wife from his own phratry, which exhibits the fallacy of all the old school theories respecting exogamy among Australian tribes.

Another variation in the intermarriages of the sections allows Murruri to wed an Ibbundyerra or a Kubbundyerra. Further details in regard to these marriages are passed over here, because they are explained in dealing with the Kamilaroi farther on. In both the last mentioned instances, Murruri must be of a different lineage to the Murruri of the preceding paragraph, but it is evident that he also marries a woman of either phratry which is another proof of the non-existence of exogamy. Furthermore, the above statements disclose the fact that the men of the section Murruri, taken in the aggregate can marry into any of the whole four sections of women noted in Table I.

A page or two back it was stated that the children follow the phratry and totem of the mother, but this does not constitute exogamy, because we have also shown that a Murruri, for example, can marry into either phratry, and consequently into either group of totems.

In making the betrothals already referred to, the old men endeavor, as far as the pedigrees will admit, to arrange that the brothers and sisters of certain families, shall intermarry with the brothers and sisters in certain neighboring families, whether in the same tribe or in an adjoining one. This has the effect of binding the two intermarrying families together by ties of kinship, and thereby strengthening their claims to consideration in the tribal councils. It also adds to their joint importance at the great gatherings which take place for initiatory ceremonies, barter and other purposes.

SOCIOLOGY OF THE KAMILAROI TRIBES.*

The Kamilaroi territory may be approximately described as extending from Jerry's Plains on the Hunter river, as far as Walgett and Mungindi on the Barwon, taking in the greater parts of the basins of Namoi and Gwydir rivers, New South Wales.

The community is divided into two phratries called Dhillbai and Kuppauthin, with their feminine equivalents Dhillgaigon and Kup-

* For my "Bora of the Kamilaroi Tribes," see Proc. Roy. Soc., Victoria, Vol. X, N. S., pp. 137-173.

For my "Language of the Kamilaroi, etc.," see Journ. Anthropol. Inst., London, Vol. XXXIII, pp. 259-283.

pathingun. Dhilbai is again divided into two sections called Murri and Kubbi, and Kuppathin is similarly divided into Ippai and Kumbo. In each of these sections the names of the women are slightly different from those of the men, as will appear from the following synopsis:

TABLE II.

Phratry.	Husband.	Wife.	Son.	Daughter.
Dhilbai	Murri	Butha	Ippai	Ippatha
Kuppathin	Kubbi	Ippatha	Kumbo	Butha
	Ippai	Kubbitha	Murri	Matha
	Kumbo	Matha	Kubbi	Kubbitha

All that has been said in preceding pages respecting the Kurnu subdivisions into "shade" and "blood" castes, totems, descent, betrothals, etc., apply to the Kamilaroi and will not be repeated. Murri marries Butha, as in the table and she may therefore be called his "tabular" wife; or he has the alternative of marrying an Ippatha maiden instead. Again, a man of the Kubbi section, whose "tabular" spouse is Ippatha, can marry a Butha. That is, Murri and Kubbi can exercise their choice over the same two sections of women in the opposite phratry.

There is a further mutation in the matrimonial laws. Murri of a certain lineage can marry a Matha or a Kubbitha, and Kubbi has marital rights over the same two women. Put in other words, Murri and Kubbi can marry into both the sections of their own phratry. Examining these facts still farther, it becomes apparent that the men of any and every given section, taken collectively, can marry into the whole four sections of women set down in Table II.

The foregoing statements prove beyond question that there cannot be any exogamy in the Kamilaroi community. The same complete absence of exogamy is found among the tribes known as the Wiradjuri, Ngeumba, Wongaibon, Wailwan, Barkunjee and others in New South Wales.

SOCIOLOGY OF SOME TRIBES IN VICTORIA.*

If we assume an approximate line drawn on the map of the State of Victoria from Geelong *via* Castlemaine to Pyramid Hill; thence *via* Lake Tyrrell to a point on the boundary between Victoria and South Australia where the 35th parallel of latitude intersects it; thence along that boundary southerly to the ocean; and thence by the sea-coast easterly to the point of commencement at Geelong. Here the people comprising all the tribes within the region thus described are divided into two phratries called respectively Gamatch and Gurogitch, or mere dialectic variations of these. The rules of intermarriage and the descent of the offspring, including the masculine and feminine forms of the names, can be represented in tabular form. The descent of the phratries and the same in all cases through the women.

* *Aboriginal Languages of Victoria.* Journ. Roy. Soc., N. S. Wales, Vol. p. 70-106.

TABLE III.

Phratry.	Husband.	Wife.	Son.	Daughter.
A	Gamatch	Gurogitchgurk	Gamatch	Gurogitchgurk
B	Gurogitch	Gamatchgurk	Gurogitch	Gamatchgurk

According to the table, the Gamatch and Gurogitch intermarry one with the other, but this is subject to certain regulations. For example, take a Gamatch man and his sister; then the man's daughter's child marries his sister's daughter's child. In this case, which is the normal or "tabular" custom, a Gamatch marries a Gurogitchgurk. In some instances, however, according to pedigree, the man's daughter's child mates with his sister's son's child, which gives the irregular custom of a Gamatch marrying a Gamatchgurk. It is needless to add that these facts altogether disprove the existence of exogamy among Victorian tribes.

For a full account of the highly interesting partitions and repartitions of the two phratries in these tribes, and also for a comprehensive description of their ceremonies of initiation, the reader is referred to my "Ethnological Notes on the Aboriginal Tribes of New South Wales and Victoria," (Sydney, 1904) pp. 84-132. See also my "Victorian Aborigines—Their Initiation Ceremonies, etc.," American Anthropologist, vol. xi (1898), pp. 325-343.

SOCIOLOGY OF THE WARRAMONGA TRIBE.

In June, 1898, I published a short account of the sociology of the Warramonga tribe in the Northern Territory,*—a name given to the northern and central portions of South Australia. The home of this tribe is around the Tennant Creek telegraph station, reaching south to Davenport Range and northward to Whittington Range or thereabouts.

The community is divided into eight sections, each of which has a distinguishing name for the males as well as for the females. Upon tabulating these names we discover that eight sections of the women can be classified genealogically into two separate sets, for which we may adopt the name of Cycles, each of which consists of four specific sections of women. Each cycle has perpetual succession and remains intact by means of its women, as in the following table:

TABLE IV.

Cycle or Phratry.	Wife.	Husband.	Son.	Daughter.
A				
	Nungulli	Chungari	Chapulcherri	Nulcherri
	Nulcherri	Takamara	Chupulla	Narulla
	Narulla	Taponunga	Tapunkadi	Napunkadi
	Napunkadi	Champacha	Chungulli	Nungulli
B				
	Namachilli	Chungulli	Champacha	Nampacha
	Nampacha	Tapunkadi	Taponunga	Naponunga
	Naponunga	Chupulla	Takamara	Nakamara
	Nakamara	Chapulcherri	Chungari	Namachilli

* Journ. Roy. Soc. N. S. Wales, Vol. XXXII, p. 73.

In studying the upper half of the table or Cycle A, we notice that the women in the "Wife" and "Daughter" columns reproduce each other in a certain rotation. For example, Nungulli has a daughter Nulcherri; Nulcherri is the mother of Narulla; Narulla produces Napunkadi; and Napunkadi has a daughter Nungulli, being the section name with which we started. This series is continually repeated in the same order, no matter which name we commence with. If we take the women in the lower half of the table, Cycle B, we obtain a series which repeats itself forever in the same manner.

Taking the first name in the table we see that Chungari marries Nungulli, Takamara weds Nulcherri, and so on for all the others. These are the normal and most general alliances and may therefore be distinguished as "tabular" marriages. In my article of 1898 already quoted I showed that Chungari had the "alternative" of marrying a Narulla, and that Taponunga could marry a Nungulli—that is, that these two men could reverse their wives, so to speak. I also showed that Chupulla could take Namachilli as an alternative wife and that Chungulli could espouse Naponunga in the same reverse order.

In 1901 when further reporting the Warramonga sociology, I again drew attention to the "alternative" wives. At the same time I reported that a man had the further prerogative of marrying into a third section of women, which I denominated the "rare" rule of marriage.* Shortly after writing the article published in 1901, I gathered additional details from my correspondents residing in that district, which prove that a man can espouse still another woman from a fourth section, which I have denominated the "exceptional" law. † Up to the present time, so far as I am aware, no other author has described either of the two last mentioned alliances—the "rare" and "exceptional"—in any of the tribes of Central or Northern Australia.

Let us now submit a brief explanation of the inter-marriage of the Cycles and Sections. Taking the first man in the "Husband" column of Table IV we see that Chungari marries Nungulli as his "tabular" spouse. He can instead take a Narullo as his "alternative" wife. Both these women belong to Cycle A. Taponunga marries the same two women, but he takes Narulla as his "tabular" or Nungalli as his "alternative" wife.

Again, Chungari, if of the proper lineage, could marry a Naponunga as his "rare" wife, or a Namachilli as his "exceptional" spouse. These two women would be obtained from Cycle B. A Taponunga man could marry the same women that Chungari could, but he would take Namachilli as his "rare"

* Queensland Geographical Journal, 1901, Vol. XVI, pp. 70-75.

† American Anthropologist, Vol. 7, N. S., p. 304.

CHINESE DRUMS, BELLS AND TOWERS.

CHINESE DRUMS, BELLS AND TOWERS.

BY HENRY PROCTOR, M.R., A.S.

A most interesting work on this subject has been published under the auspices of His Britannic Majesty's Government for the Board of Education, South Kensington.* The first chapter is devoted to an historical introduction. According to one author Chinese history is carried back by some to a mythical period of fabulous antiquity: their first man, Pan Ku, merging from chaos as the embryo of an all-productive cosmic egg or atom. He is followed by a mythical series of celestial, terrestrial, and human rulers, some of the last of which were called Yu Ch'as (the West-having) because they lived in trees in those days, and others Sui Jên (the Fire Producers,) the discoverers of the primitive friction hand-drill of wood. In the second chapter, which deals with "Sculpture," he says that "there are no relics of carved stone in China to be compared in importance or antiquity with the ancient monuments of Egypt, Chaldea, and Susa." The chief materials of Chinese buildings have always been wood and bricks, so that stone is generally used only for architectural accessories, and for the decoration of interiors. The highest reverence is paid to any ancient relics of stone and bronze with inscriptions, a long series of books under the heading of *Corpus Inscriptionum* having been printed during the last thousand years, the bibliography of which would fill many pages. Two indispensable dictionaries of the ancient script for the antiquary are the *Shuo Wên*, compiled by Hsu Shên in A. D. 100, as an aid to the decipherment of the old books carved on tablets of bamboo, and the *Shuo Wên Ku Chow Pu* by Wu-Ta-Chêng, a high official of the present reign, published in 1884; with a preface by Pan Tsu-Yin, President of the Board of Punishment; being a collection of some 3,500 characters of the script of the Chou dynasty (B. C. 1122-249) reproduced in exact facsimile from actual specimens of stone, bronze, seals and pottery of the period.

The most cherished relics of the Chou dynasty are ten stone drums, now installed in the two side halls of the principal gateway of the Confucian temple at Peking, where they were placed in the year 1307 by Kuo Shou-Chong, the famous minister and astronomer of the reigns of Kublai Khan and his successor. They are really mountain-boulders, roughly chiseled into the shape of drums about three feet high. The inscriptions on the drums comprise a series of ten odes, a complete one being cut on each drum. They celebrate an imperial hunting and fishing expedition in the country where the drums were found, and relate how the roads had been levelled and the river courses cleared for a grand battue carried out by troops of

* "Chinese Art," by Stephen Bushell, C.M.G., B.Sc., M.D., late physician to H. B. M. Legation, Peking.

warriors. A facsimile of the first inscription is translated somewhat as follows:

"Our chariots were solid and strong,
Our teams of well-matched steeds;
Our chariots were shining and bright,
Our horses all lusty and sleek.

The nobles gathered round for the hunt,
And hunted as they closed in the ring,
The hinds and the stags bounded on,
With the nobles in close pursuit.

Drawing our polished bows of horn,
And fitting arrows to the strings,
We drove them over the hills;
The hoofs of the chase resounded,
And they herded in close-packed mass,
As the drivers checked their horses.

"The hinds and stags pressed swiftly on,
Till they reached the great hunting park,
He drove on through the forest,
And as we found them one by one,
We shot with our arrows the wild boar and elk."

In Chapter III dealing with architecture he says: "The first impression given by the view of a Chinese city from the parapet of the city wall—whether it be Tientsin, with the 150,000 houses, of its population of shopmen and artisans, or Peking, with its temples, its imperial and princely palaces and its public buildings—is that of a certain monotony, resulting from the predominance of a single type of architecture. China, in fact, in every epoch of its history and for all its edifices, public or private, has kept to a single architectural model. Again it is a cardinal rule in Chinese geomancy that every important building must face the south, and the uniform orientation resulting from this, adds to the general impression of monotony. Ruins in China are rare, and we must turn to books to get some idea of ancient architecture. The first large buildings described in the oldest canonical books are the lofty towers called *t'ai*, which were usually square and built of stone, rising to the height sometimes of 300 feet, so that they are stigmatized as ruinous follies of the ancient kings. These towers were of three kinds, storehouses, for treasures, watchtowers and astronomical observatories. Among the later representatives are the towers of the great wall, which were built of stone with arched doors and windows.

Chapter IV. is devoted to "Bronze." From the earliest antiquity the Chinese are recorded in their annals and traditions to have been acquainted with the art of building and chiselling bronze, and the examples which have survived to the present day reveal something of their archaic history and primitive superstition. During the third millennium B. C. the technical methods were gradually improved till we come to the reign of the great *Yu*, the founder of the *Hsia* dynas-

ty, who is recorded to have cast the metal, sent up as tribute from the nine provinces of his empire into nine tripod caldrons of bronze. Copper was highly valued during the ancient dynasties and it is often referred to in the older books under the name of *Chin*, or "metal," being the metal, *par excellence*, of the period. It was used with an alloy of tin in the fabrication of bells, gongs, sacrificial utensils, axes, hatchets and halbert heads, and trident spears, swords, spades, hoes, arrowheads and concave mirrors. The five colossal bells at Peking cast in the reign of Yung Lo (A. D. 1403-1424) weigh about 120,000 pounds each, are 14 feet high and 34 feet in circumference. They are covered inside and out with Buddhist Scriptures in Chinese script, interspersed with Sanskrit formulae. An ancient bronze bell of the Chou dynasty, has the following interesting inscription, which is anterior to the 7th century B. C.:

"I, Kuo Shu Lü, say: Grandly distinguished was my illustrious father, Hui Shu, with profound reverence he maintained a surpassingly bright virtue. He excelled alike in the rule of his own domain and the liberal treatment of strangers from afar. When I, Lü, presumed to assume the leadership of the people and to take as a model the dignified demeanor of my illustrious father, a memorial of the event was presented at the Court of the Son of Heaven, who graciously honored me with abundant gifts. I, Lü, humbly acknowledge the timely gifts of the Son of Heaven, and proclaim their use in the fabrication for my illustrious father, Hui Shu, of this great sacrificial bell. Oh, illustrious father, seated in majesty above, protect with sheltering wings us who are left here below. Peaceful and glorious extend to me, Lü, abundant happiness! I, Lü, and my sons and grandsons for ten thousand years to come, will everlastingly prize this bell and use it in our ritual worship."

Altogether this excellent work forms a most valuable contribution to our knowledge of the past and present of the Chinese Empire. The volume is embellished with 104 illustrations, with facsimiles and translations of inscriptions.

A COLLECTION OF EARLIEST PRINTED BOOKS.

In the early days of printing it was customary to prepare special copies for members of royal families, bishops, cardinals and the nobility, and many of them were decorated in a most elaborate and costly manner. Mr. Morgan has made a collection of these which is of great value and interest. He is also the possessor of at least one unique book—the only copy known of an atlas of the different parts of the Mediterranean, with descriptive text in verse, which was printed by Bartholomeo Dalli Sonnetti in Venice in 1476. It is a curious volume.

The first printing press set up by Gutenberg and Faust passed into the hands of the latter at the dissolution of their partnership, but Gutenberg immediately began to build another, and as soon

as it was finished, in 1460, he issued an edition of Janna's "Catholicon," which is the third book printed and is also very rare. Mr. Morgan's copy is in perfect condition. The neighboring cases contain other early books printed by Gutenberg, and his imitators, showing the improvement made in the art. There is a copy of the first book printed in Roman type. It was published at the monastery of Sabiaco, in 1465. Up to that date Gothic type had been used exclusively.

Mr. Morgan's collection also contains a copy of the first book written by an Englishman—Richard the Bury's "Philobiblon," which was printed at Cologne in 1473. It is one of the rarest of all books and very highly prized. The first edition of Petrarch, printed in 1470; the first illustrated book, published in 1488; the first edition of Homer's Iliad, of Dante and other classics, making a superb set; the first English book—"The Historie of Jason," printed by Caxton in London in 1475; the first edition of Chaucer's Canterbury Tales, 1484; the first book printed in London; the first printed at Oxford; the first book on sports, printed at St. Albans in 1486; the first book printed in Paris and the first in Rome, and a large collection of the first prints of Aldus, the founder of the Aldine Press, can be found here.

Mr. Morgan's collection is almost complete; it lacks only a few copies of being a perfect collection of all the books printed between the invention of the art and the year 1500. He is adding to this constantly, and hopes to be able to fill in the gaps. During his present journey he has made several purchases, but people here do not know exactly what they are. The other day one of the London papers which is devoted to book news contained an announcement of the sale of five volumes for \$100,000; but the titles of the books and the names of the seller and purchaser were not given. Mr. Morgan is supposed to have been the chief figure in this mysterious transaction, but the facts will not be known until his return to this country. This announcement has provoked several earnest protests in the English press against permitting the most precious gems of British libraries to go to America. At a recent Shakespeare commemoration banquet Sidney Lee complained that American collectors were stripping Great Britain of all the early editions of Shakespeare's plays and other books which have been considered national heirlooms. As an illustration he mentioned the fact that at the auction sale of the library of the late Locker Lampson of Rowfant twenty-seven copies of Shakespeare's works, printed in the lifetime of the author, were gobbled up by American bidders. But as long as Americans are willing to overbid English buyers the latter have nothing to complain of.

The most valuable book owned by Mr. Morgan, and one of the most valuable in the world, for which he paid \$50,000, is a manuscript "Book of Hours," prepared for the Queen of Naples in 1390 by Julio Clovio, a celebrated artist. It is about the size of an ordinary prayer-book, and every page is illustrated with miniatures and other designs. The covers are of solid gold, exquisitely chiseled.

Mr. Morgan has gone in for manuscripts a good deal, but his collection is not on exhibition. It is locked up in the safe deposit vault. He has invested many thousands of dollars in autograph letters.

The highest price ever paid for an autograph letter was \$5,150 for one written by Lord Nelson to Lady Hamilton. The next highest was \$4,525 for a fourteen-page epistle written by Mary Queen of Scots to a British nobleman in 1562.

From Record-Herald

WILLIAM E. CURTIS.

THE PUEBLO PEOPLE AS CITIZENS.

The Pueblos never attempted to exercise the rights of citizenship under the Mexican government, and were from the very beginning of Spanish authority left to govern themselves in their own way. There has been very little change in their habits of living since the time of their discovery.

The laws of the Pueblos are simple, but they are complete and are thoroughly in force. Serious crime is unknown and minor offenses are severely punished. The patriarchal influence is very strong. The paternal influence is stronger, and the respect shown by the young for their parents and elders is an example for every civilized race. The children are never disobedient and are never spoiled; parents are never neglectful and never harsh. Conjugal fidelity is esteemed as the highest virtue, and its violation is punishable by death. The rights of women are clearly defined. The man tills the fields and they belong to him. He owns the live stock and the tools, and everything that pertains to outdoor life. For the same logical reason the wife is the owner of the house and all it contains, and has control of the children until they have reached years of maturity. No man can interfere with the internal affairs of a household. No woman can dictate what shall be done upon the farm. If a husband ill-treats his wife or children; if he neglects to support them properly; if he is unfaithful in any way, or if he wastes his earnings in dissipation or speculation, he is evicted from his home, and if he does not reform after the admonition of his elders and the village council he will be evicted from the pueblo and becomes an outcast. He may seek a home in a neighboring village, but he will not be received there; he may find employment on the railroad, or in some town along the line, but the attachment of the Pueblo for his home and his native village is so intense that this self-exile would be the severest punishment that could be inflicted upon him.

THE UNIVERSITE ST. JOSEPH, OF BEYROUTH.

BY JOSEPH OFFORD.

It is not generally known in the United States, as it deserves to be, that the Université St. Joseph of Beyrouth, Syria, has made it possible for American students desiring to acquire a sound knowledge of oriental languages and of Hebrew, Greek and Roman history to obtain an excellent education in these subjects. It also supplies an oriental training sufficient to equip students either for missionary work in the east, or for professorships of Biblical learning, such as can hardly be obtained elsewhere. By joining the new "Faculté Orientale" of the University, which was organized in 1902. and paying the extremely moderate fee of 200 francs per annum, a student is free to attend all the numerous courses of studies and lectures and to use the large library, and attains all the other privileges.

It should be stated that the University is carried on under the auspices of the Roman Catholic Church, which has in recent years reiterated the desire of the "Holy See" that oriental studies should be more fully followed than formerly by its theologians.

The University curriculum is not, however, at all designed merely for the "training of ecclesiastics, but is specially framed to suit a man of affairs desiring to take up a scientific or professional career in the Orient. Although the University prospectus does not allude to this, the course of lectures held there is also extremely suitable and valuable for any person intending to take up the study of ancient archaeology as connected with Western Asia, Egypt and Eastern Europe.

The basis of instruction is Arabic, a language of such richness and structure that its knowledge insures a possibility of easily acquiring comprehension of all the other Semitic idioms. The medium of teaching is French, and the term of study advised three years. but attendants may come to a course of lectures for as short a term as they please. Regular students have to attend the classical Arabic course three years, and the Syriac and Hebrew courses for two years; comparative Semitic studies one year, Oriental History and Geography three years, and Oriental Archaeology two years. It is also possible for students to learn the Arabic dialects, Ethiopic, Coptic, Hebrew and Greco-Roman Antiquities.

What are termed the "free students," that is, those who select their own branches of study, of course would only take up such of the several subjects as they prefer.

The University has just published the Bulletin of the studies that have been carried out during 1904-5 and a summary of this will provide an excellent idea of the curriculum. In Oriental Archaeology, Professor P. S. Ronzevalle lectured upon the systems of writing of Chaldea, Egypt, Phoenicia and Cyprus, and upon

various Asianic Scripts, including the Hittite. He announced his adherence, for the present, to De Rouge's theory of the origin of the Phoenician and Greek alphabets from the Egyptian hieratic. The increase in material for the study of the subject from the Cretan hieroglyphs and the immense collection of texts now available by the publication of the "*Corpus Inscriptionem Semiticarum*," induced *Perè Ronzevalle* to devote all the first term of 1905 to a discussion of the development of the Phoenician alphabet, reserving for the end of this year his lectures upon other scripts. Two courses of addresses were occupied with the numismatic evidences, which since *Dr. Rouvier's* works upon the Phoenician coinage of Syria has been so much augmented. It is to be hoped these lectures will shortly be published, for since the time of *Lenormant's* work, when Phoenician numismatic study was in its infancy, scarcely anything except essays by *M. Babelon* has been done.

The Coptic course is under the supervision of *Perè Mallon*, whose Coptic Grammar has achieved such a success, but who for his college pupils uses *Steindorf's* "*Koptische Grammatik*." The literature mostly employed was the "*Acts of the Egyptian Martyrs*," published in a French translation of *Perè Hyvernât*, 1886, and the collection of Coptic Ostraca published by the "*Egyptian Exploration Fund*."

Greco-Roman Antiquities are under the charge of *Perè Jalabert* who last year edited the most interesting painted funeral stelae of Greek Mercenaries at Sidon. His lectures were entirely devoted to epigraphy, and the series of inscriptions selected were chiefly those relating to the Roman wars and dominion in Palestine. Texts relating to the two *Agrippas* and to other Syrian princes were also included.

In the autumn session of this year *Perè Jalabert* will take up The Worship of the Emperors in the Provinces and at Rome. The cults and religions of Syria in Roman times and again return to the Roman army in Syria and Judea, mostly in reference to military diplomas. The commerce of Roman Syria and the Palmyrene inscriptions will also be discussed. The Hebrew classes, under Professor *Meyrand*, will be entirely devoted to the Old Testament.

History and Geography, under Professor *P. H. Lammens*, is concerned chiefly with the times of Mahomet and the Caliphs, and the modern administration, ethnography, productions, commerce and climate of the Lebanon district.

The Arabic and Syriac courses include Grammar and Grammatical Theories, Rhetoric, Literature and History.

Full particulars of the aims and arrangements of the University can be obtained by a letter to the Secretary at Bevrouth, and it is to be hoped that some American scholars will avail themselves of the great facilities for acquiring knowledge offered by the learned Fathers who have exiled themselves from France in order to aid the progress of civilization in the East.

ANTHROPOLOGICAL NOTES.

BY ALEXANDER F. CHAMBERLAIN.

AUTHENTICITY OF CAVE-PICTURES. The authenticity of the animal and other pictures on the walls of the caves in southern France, etc., has been doubted by some authorities, who refused to believe them the work of primeval man. All doubt in the matter, however, seems to have been dispelled by recent discoveries of such engravings covered by a stalactitic deposit, which has both preserved them and at the same time proved their antiquity, which their rudeness corroborates. Reports on these new caves have been made by Capitan and others (in *R. del 'Ec. d'Anthr. de Paris*, 1904).

ANCIENT EGYPTIANS. As the result of the observation of some 1560 crania representing 6000 years of ancient Egyptian history, and nearly all belonging to the Province of Thebes, Messrs. A. Thomson and D. Randall-Maciver, in their interesting and valuable monograph, "The Ancient Races of the Thebaid (Oxford, 1905)," find that, in this region, there have always existed two types,—negroid, non-negroid,—represented in the proportion of 1:4, or 1:5. Dr. Giuffrida-Ruggeri, who reviews this monograph (*A. Soc. Rom. di Antr.*, 1905, pp. 311-312), expresses the opinion that comparatively few of the so-called "negroid" crania are such in reality. The two types in question represent rather the coarser and the finer types of the Mediterranean stock, varieties found probably in all portions of the Mediterranean area. In a collection, e. g., of 210 Sicilian skulls, Dr. Giuffrida-Ruggeri found a dozen of the coarser type and two negroid. He also hesitates to assign to the oscillations in cranial capacity, noted by the authors for the various dynasties, any great importance, holding them to be of statistical origin. Thomson and Randall-Maciver find no evidence of the existence of pigmies. Such small skulls as were discovered belong with long bones that indicate average stature or a little below it.

"AEGEAN MONEY" IN SARDINIA. In the Museum at Cagliari, Sardinia, are three bars of copper resembling in shape the outspread hide of an animal and having marks on both sides, the form of which is said to be "Aegean." They were found at Serra Ilixi, in the Province of Cagliari, and have been described by Pigorini (*Bull. di paletnol. Ital.*, 1904), who compares them with similar objects from Cyprus, Crete, Chalkis and Mycenae, and thinks that they are "talents," like those carried by the tribute-bringing Kefti of the Egyptian monuments. H. Schmidt (*Zbl. f. Anthr.*, 1905, p. 110), who calls attention to the resemblance to hides outspread, suggests also comparison with Schliemann's "Homeric talents." Comparison with similar objects in America would seem to be in order.

ORIENTAL DEPARTMENT.

Edited by

DR. CHAS. H. S. DAVIS.

A NEW ASPECT OF THE SUMERIAN QUESTION.

"A new Aspect of the Sumerian Question," is the title of an article by Prof. Morris Jastrow, Jr., in the January *Journal of Semitic Languages*. Some fifty years ago it was supposed that a race speaking an agglutinating idiom had occupied the Babylonian plains before the Assyrians, and that Semitic civilization had gained a footing in the country by grafting itself to this anterior civilization. To this language Hincks gave the name of Accadian, which, though proposed by him with all reserve, seems for many years to have enjoyed a certain amount of favor. Oppert, however, took Accadian to be absolutely synonymous with Assyrian, both simply implying the Semitic speech of Nineveh and Babylon, the language of the third column of the Achæmenian cuneiform inscriptions.

The Sumerian theory was not accepted off-hand, and after fifty years the "Sumerian problem" is still far from having reached a solution that can be regarded as altogether satisfactory. It was at first assumed that the Accadian language has disappeared, but by means of monuments a "Turanian" text had been found, written in Assyrian cuneiform characters. It was then proclaimed that the forerunners of the Assyrian Semites on Babylonian soil had spoken an Ural Altaic tongue, more especially allied to the Finnic group, that they had reached a high state of culture, and that they had communicated to the Assyrian immigrants their cuneiform graphic system.

In the *Journal Asiatique* for June, 1874, M. Joseph Halévy assailed this theory and also attempted an interpretation of the texts totally different from that of the Accadians. He held that the presence of an Ural Altaic speaking people on Mesopotamian soil was proved neither by the monuments, which all belong to Semitic art, nor by the geographical names—also Semitic—nor yet by the evidence of writers. Dr. Halévy was a strong and consistent advocate of the "anti-Sumerian" hypothesis for a period of over thirty years, and it was by his insistence upon the absurdities to which his opponents were led, that forced from them the admission that a considerable number of phonetic values attaching to the signs of the cuneiform syllabary were of Semitic origin. The number of signs placed in this category grew until at present at least one hundred of such phonetic values are by common consent admitted to be derived in one way or the other from Semitic words.

At the International Congress of Orientalists in 1881, Professor Paul Haupt presented a paper on "Die Sumerisch-Akkadische Sprache." To this paper he has attached an appendix by Professor Otto Dorner, in which that eminent scholar showed that the "Ak-

kadian," as it was then generally called, showed no affinity to the "Ural-Altaic" group with which "Sumerologists" were disposed to class it. Hommel contends that the Sumerian belongs to the Altaic branch of the Ural-Altaic group, and in his latest work, "Geographie und Geschichte des Alten Orients," he furnishes a list of Sumerian words, with their supposed Turkish equivalents. The most recent writer on the "Sumerian" problem, Fossey, in his *Manual d'Assyriologie*, Ch. II, has attempted a refutation of Halévy's "Anti-Sumerian" hypothesis, without any particular indication as to the place to be accorded to the non-Semitic idiom of the Euphrates valley in the "Turanian" group or groups.

Professor Jastrow, after showing the artificial character of the so-called "Sumerian" script, says, that the artificial character of the Sumerian being granted, it does not yet follow that the basis may not be a language different from the Babylonian; but at all events it is a great gain to establish the fact that what passes as Sumerian is to a large extent an artificial product, due to the Semitic settlers of the Euphrates valley; and if it reverts to a non-Semitic language once current in Babylonia, it no longer represents that language in its purity. The problem then consists in endeavoring to separate the artificial elements contributed by the supposed Semitic conquests of the "Sumerian" founders of the Euphratean culture from the genuine features which belong to the language spoken by the founders—a task that has not yet been attempted, and which does not promise much success to the one who undertakes it.

Professor Jastrow calls attention to a most suggestive series of letters which have appeared in the July, 1895, number of the *Revue Semitique*, and which were exchanged between Halévy and Dr. Rudolf Brünnow, and which he suggests should be read, not only by all Assyriologists, but by all Semitists, as well as by students of linguistics in general. Passing far beyond the position taken by Sumerologists in admitting that the genuine Sumerian has been tampered with by the Semites of later days and "Semitize" to a certain degree, Brünnow is prepared to accept the view that all the so-called bilingual texts revert to a Babylonian origin, and that the so-called "Sumerian" version is in all cases a translation from the Babylonian.

Professor Jastrow considers that the honored name and distinguished services of Brünnow justify a careful and respectful consideration of any view advanced by him. He therefore gives a careful resume of Brünnow's theories, and the concessions Halévy has made to them, but says that no elaborate argument is required to demonstrate the untenability of Brünnow's specific hypothesis. Says Professor Jastrow: "The 'Sumerian' problem, as it has hitherto been presented, has been essentially a problem of origins, the difference between the two camps being resolved into the question whether Semites or non-Semites produced the culture of the Euphrates valley. The new aspect of the problem involved in Brünnow's position and in Halévy's concession eliminates this element—

definitely in the one case and temporarily, at least, in the other. The removal of this disturbing element is to be counted a distinct gain and points the way along which further endeavors toward the definite solution of the problem should proceed. If it is once admitted that the existence of a "Sumerian" language expressed in the cuneiform script does not necessarily involve the non-Semitic origin of that script, one can conceive the possibility of accepting the contention of the Sumerologists without involving oneself in the difficulties which the acceptance of their theory in its present form includes—difficulties that have from time to time brought distinguished adherents, like Guyard, Pognon, Jäger, Price, McCurdy, Alfred Jeremias, Thureau-Dangin, and at one time Delitzsch himself, the teacher of two-thirds of the present Assyriologists of acknowledged rank, to Halévy's side, and that have evoked notable concessions, as, *e. g.*, Zimmern at the outset of his brilliant career was inclined to make, and that Brünnow now has made."

Professor Jastrow thinks, that all things considered, the indications are that ere long Halévy will have the satisfaction of knowing that in reality the tables have been turned, and the burden of proof for the thesis that Sumerian represents a real language distinct from the Semitic Babylonian, rests with those who maintain it, while those who maintain that Sumerian represents a highly complicated and largely artificial system for writing Babylonian, devised on the basis of an earlier ideographic system before a simpler phonetic system was introduced, will have the assumption of plausibility in their favor.

Professor Jastrow closes his article as follows: "I trust at some time to develop still further, on the general lines laid down by Halévy, the thesis of the largely artificial character of the devices used in the so-called 'Sumerian' system—which I would designate as the modified ideographic system—for indicating verbal forms, prepositions, syntactical constructions, and the like. Meanwhile, I trust that this sketch of certain new aspects of the problem may serve at least to call renewed attention to the fact, admitted, *e. g.*, by Jeremias in his recent admirable sketch of the Babylonian-Assyrian religion, that 'the Sumerian problem still awaits a definite solution'; and I believe, furthermore, that Jeremias is justified in his assertion that the problem will not be solved by the exclusive appeal to philology."

ARCHÆOLOGICAL NOTES.

There has been recently founded a Siam Society, the objects of which are to investigate and encourage arts, science, and literature in relation to Siam and the neighboring countries. The patron is the Crown Prince of Siam, and the vice-patron is Prince Damrong Rajanubhab, Minister of the Interior. It is proposed to form a library of books and MSS. and an ethnological museum. A *Journal* will be published every six months, containing a report of the proceedings, including the papers that may be read.

Last summer Professor E. F. Gautier, a member of the Faculty at L'Ecole des Lettres of Algiers, crossed the Sahara between Algeria and the Niger River. He is the first to cross this wide part of the desert since Laing was murdered near Timbaktu in 1826. The explorer found abundant evidence that this part of the Sahara once had a very large population of the Neolithic period of development. His finds included many arrow-points and axes of polished stone. Even the waste regions were inhabitable until a comparatively recent period. Proofs of this are found in the thousands of drawings upon the rocks, the graves in which, everywhere, the same kinds of implements and other objects were found, and the stones used for grinding grain. These stones show that agriculture was practiced here, and that civilization was considerably advanced. M. Gautier is now engaged in the preparation and publication of the results of his three years of exploration in Tuat and other parts of the northern desert and of his journey across Sahara.

The best manual for the History of Religions is Chantepie de la Saussaye's *Lehrbuch der Religionsgeschichte*. This work has been translated into French, and now we have the third German edition in two volumes (Tübingen: J. C. B. Mohr). The introduction discusses the Science of Religion and examines various systems of classifying the religions of the world. The editor and Dr. Thomas Achelis treat of the religions of African and American savages, and of South Sea Islanders and Mongolians. Prof. J. J. M. de Groot writes of Confucianism, Taoism, and Buddhism. Japanese Buddhism and Shintoism is treated by Prof. R. Lange. Egyptian religion has been entrusted to Dr. H. O. Lange, while the whole of the Semitic peoples of Western Asia (including Babylonians and Assyrians, Canaanites, Syrians and Phœnicians) have been undertaken by Dr. F. Jeremias. The Religion of Israel is treated by Prof. Valetton, while Prof. Houtsma is entrusted with the subject of Islam. The second volume treats of the Indo-Germanic peoples. Prof. Lehmann treats of the Vedic and Brahmanic religion, Vainism, Buddhism, and Hinduism. He also deals with Persian religion, including the pre-Zoroasterian period. Prof. Holwerda writes of the Religions of Greece and Rome, and de la Saussaye of the Germanic and Slav religions.

Contents of the *Proceedings* of the Society of Biblical Archæology. Vol. 28, Part I:

The "Star of Stars" and "Dilgan"—E. Plunket. A Note on "The Early Monarchy of Egypt"—F. Legge. The Inscriptions in the Quarries of El Hôsh—G. Legrain. Note on a Hittite Inscription—E. Sibree. Observations on the Ancient History of Egypt—J. Lieblein. The Astrological Character of the Egyptian Magical Wands—M. A. Murray.

The following inscription is found on an Accadian tablet:

"When on the first day of the month *Nisan*, the star of stars, and the moon are parallel, that year is normal. When on the third day of the month *Nisan*, the star of stars, and the moon are parallel, that year is full." Professor Sayce and Mr. Bosanquet have identified the star of stars with *Dilgan*, and *Dilgan* with *Capella*. In the above article Miss Plunket brings forward some strong arguments to prove that *Dilgan* was not *Capella*, but with the constellation *Piscis australis*—the Southern Fish.

Mr. Legge concludes his article as follows: "Dogmatism, notoriously unsafe in matters of science, is in Egyptology, peculiarly liable to disaster; and it is, of course, quite possible that the earth may yet give up some inscription that will put the identity of Aha with Menes beyond a doubt. But until this happens, he will be rash who will put faith in any lists of the Menite dynasty which, like those of Dr. Sethe and Prof. Petrie, are founded on this equation.

Prof. Lieblein considers that the Egyptian civilization, as manifested in its most developed form on the monuments of the period of the pyramids, commenced in prehistoric times, probably several centuries, or rather some thousands of years, before Menes. It originated in that part of the Valley of the Nile which extends from Heliopolis in the North to the neighborhood of Abydos on the South. The high civilization that the monuments of Snefru and of other kinds of the IVth dynasty attest, commenced in Middle Egypt thousands of years before the immigration of the Abydenian people in the South, and can certainly not have been developed in the short space of fifty or a hundred years that separated the rude Royal Tombs at Abydos from the fine monuments of Snefru's period at Memphis.

Miss Murray shows that the horoscopes of the kings of the XIXth and XXth dynasties still remain to us, and it is evident that these are not the first of their kind. The Egyptians, even in primitive times, had a fair knowledge of astronomy; and as astrology always precedes the exact science, we may safely say that if the Egyptians, at some primitive period of which the date is lost, knew sufficient astronomy to reform their calendar and base it upon astronomical data, they were also able to cast a nativity from the stars and set down the result in conventional signs and figures.

The Egyptian signs of the Zodiac, as given at Denderah, are the same as our own, with the exception of Cancer, which is there given as a crab. In the star maps of the Tombs of the Kings, the Scorpion is represented by the goddess Serq, showing that a constellation keeps its name, though the representatives of it may change.

Messrs. Luzac & Co., London, have recently issued Vol. XVIII of the "Semitic Text and Translation Series." It is entitled "Private and Business Letters of the Late Babylonian Period." This collection gives a picture of the social conditions of Babylonia during the term of the Jewish captivity and after the Persian Conquest. It contains transliterations and translations of about two hundred and

fifty letters of the late Babylonian periods preserved in the British Museum. The contents are of a varying nature and consist of orders placed in the hands of merchants for goods to be delivered, instructions from the priests of temples on private and business matters, correspondence between private persons on intimate affairs, family letters written by absent husbands to the wives, wifely advice to a husband, and notes from one lady to another. They form a class that has been hitherto almost untouched. And they may be said to be the only source from which we can learn the actual conditions of private life in which the late Babylonians lived. The thousands of contracts of this period show only one side, the more official and commercial, of the social scheme; the letters throw a light, not only on the family life, but also on the peculiarities of the spoken dialect in use at this time.

In the *Mitteilungen* of the German Orient-Gesellschaft, the leader of the German expedition, Dr. Koldewey, reports a discovery of great importance for the topography of the city of Babylon, and for the location of the palace of Nebuchadnezzar. This is the famous Arachtu canal, so often mentioned in the inscriptions. News is also given by the work only recently undertaken by the Society in examining the ruins of synagogues in Galilee, in charge of the three savants, Kohl, Watzinger, and Hiller. A work is thus for the first time being done that Ernest Renan so warmly pleaded for more than forty years ago, as these synagogues are of great importance from the standpoint of architecture and the development of civilization in Palestine. How urgent the undertaking is, may be judged from the fact that a number of such sites, reported only a few years ago by various travellers, have now entirely disappeared, and the commission could report on only eleven remains, but all instructive specimens of their kind.

Professor Friedrich Delitzsch's final contribution to his work on "Babel and Bible" appears in the March *Open Court*, well illustrated with early Sumerian types and specimens of art, besides reproductions of Babylonian and Assyrian musical instruments as found in the ancient monuments of these countries. Professor Delitzsch, in his delightfully informal style, dwells upon the confirmation of the Hammurabi Code in many Babylonian parallels to the Bible, and particularly notes at some length the similarity both in form and subject matter of the religious hymns and psalms of the two literatures.

In Mr. C. Lang Neil's recently published *Rambles in Bible Lands* (London, Kelly, 5s.), he makes many ingenious explanations of Bible difficulties. For example, in the fifth verse of the second chapter of the Song of Songs, we find the words: "Comfort me with apples, for I am sick of love." Instead of apples Mr. Neil understands oranges, and goes on to say, "If we supply the name of the true tree, do we not at once see the striking appropriateness

of the bride: 'Strew me with orange'?" This is just what is done with the bride down to the present day; and here, surely, in the bridal song of the Bible, we have the often-inquired for, natural, Eastern origin of the customary bridal wreath.

A subscriber has for sale a copy of Drs. Davis and Cobern's "History of Ancient Egypt in the Light of Recent Discoveries." There are 24 parts, unbound, completing the set. As this work has long been out of print, this is a good opportunity of procuring a copy. A subscriber has also for sale a set of *Biblia* from August, 1900, to December, 1905, unbound. The assistant editor has a quantity of odd numbers of back volumes of *Biblia* which he will be pleased to send to any of the *Biblia* subscribers who desire to complete their volumes. They will be furnished gratis if postage or express charges are paid.

Professor Winckler has recently issued a new part of his *Altorientalische Forschungen*, which contains a very interesting study entitled "Zur Geschichte und Geographie Israels," in which he endeavors to prove that the geographical delimitation of Palestine remains unaltered from the patriarchal period down to that of the Maccabees, but that the knowledge of this fact was lost to the redactors of the Pentateuch. Close study of the Davidic period has already convinced Stade and E. Meyer that the data handed down regarding the so-called Israelitish empire under David leave much to be wished for in the matter of clearness, and in particular that its alleged extension beyond Palmyra, as far as the Euphrates, is historically impossible. Winckler has essayed to explain the Hamath boundary (1 Macc. xii: 24-34), and he localizes it not, as has hitherto been customary, at Hamath, on the Orontes, but close to the northern boundary of Palestine. For this conclusion he adduces convincing grounds from the Bible. Some of these proofs were brought forward by Professor J. V. Prásek in the January *Expository Times*.

We have often referred to the excavations in Palestine by Professor E. Sellin of the Theological faculty at Vienna. He was abundantly supplied with the necessary resources, and was ably assisted by a young Bohemian student of Assyriology, Dr. Friedrich Hrozný. The site selected for their excavations was the ancient Megiddo at the mouth of the passes from the south to the plain of Jezreel. From Dr. Sellin's pen we have now a detailed account of the results of the excavations, in his work entitled "Tell Ta'anek," in the *Denkschriften* of the K. Akademie der Wissenschaften in Wien, with an appendix by Dr. Hrozný. The book has 13 tablets, 132 illustrations in the text, 4 plans in the text, and 2 large plans. This work of Dr. Sellin will give quite a stimulus to systematic excavation in Palestine. At some future time Dr. Sellin thinks of starting excavations at the Dothan of the patriarchal history.

Professor Sayce in an article in the February *Expository Times* throws new light on the Kasdim of the Old Testament. Although Kasdim in the plural denotes the Babylonians, Kesed in the singular was an Aramæan (Gen. 22:22), and neither one nor the other has been found in the cuneiform inscriptions. Various attempts have been made by Assyriologists to explain the name, since it was first discovered that the Kaldā or Chaldæans with whom the Kasdim had been identified were an Aramæan tribe in the marshes south of Babylonia, and that though SD might become LD in Assyrian, the converse change could not take place. Nearly forty years ago Prof. Sayce suggested that the name represented the Assyrian Kasidi or "conqueror," and for a long while this was the accepted explanation of it. But as our knowledge of Babylonian history progressed, the explanation was shown to be impossible, and other suggestions were accordingly put forward. At last, however, a satisfactory explanation of the name can be offered, and Prof. Sayce notes that the same has already occurred to Prof. Hommel.

Babylonia was called by the Sumerians the Edin or "Plain," a hold which was followed by the Semitic Babylonians under the form of Edinnu. It came to signify "the country," as opposed to "the city," and is the term used in the phrase "the beasts of the field." Thus in an inscription of Entemena, king of Lagas (B. C. 4000), the Edin Lagas is the district or territory of Lagas. The Edin was bounded by the Gu or "bank" of the Euphrates or Tigris, Kisad in Semitic Babylonian; Entemena, for example, describes the canal which separated the territory of Lagas (Tells) from that Jokha as extending from "the Great River"—apparently the Euphrates—"to Gu-Edin," "the Bank of the Plain," which later on in the same inscription is defined as the bank of the Tigris. Similarly, Khammu-rabi in one of his letters speaks of "the bank of the river of Eden" (Kisad nār Edinna). The cultivated land of Babylonia, it will be seen, was thus divided between the Eden or Plain, and the Kisad or River-bank.

Kisad is the Hebrew Kesed; and since the Aramæan tribes lived on the banks of the Euphrates and its tributaries, according to the Assyrian inscriptions, we can understand how Kesed came to be the uncle of Aram. Arphaxad, which Schrader has long since shown to be "the boundary of Kesed," and thus the equivalent of the Sumerian Edin, naturally represents the Babylonians, while for those who dwelt westerly of the Euphrates—Ebir-Nāri, "beyond the river," as it was called in later days—the inhabitants of the Kisad or River-bank, would give these names to the rest of the native population of the Babylonian plain. Indeed, Babylon was built on the Kisad rather than in the Edin, and so, too, was "Ur of the Chaldeæ."

Professor Sayce concludes an article on "The Recovery of Canaan," in the *Sunday School Times*, as follows: "Even more interesting than the contexts are the tombs discovered by Mr. McAlister. They are of every period, extending from that of neolithic troglo-

dytes to the Maccabean epoch. The most important are those of the Amorite or Jewish periods which have been examined with scientific care by their discoverers and tell us for the first time what tombs of the kind were like. Among them are some graves which are almost certainly Philistine and which were peculiarly rich in contents. Silver vases were found in them as well as pottery which resembles that from the 'prehistoric' cemeteries of Crete. This is not the first indication that the island of Caphtor from which the Philistines came was really Crete. Some of the Amorite pottery from both Gezer and Lachish has characters scratched upon it that are identical with those of the early Cretan script discovered by Dr. Evans. The intercourse between Crete and Palestine must go back to early days. At Taanach there were no traces of Cretan pottery.

"On the other hand pottery was found there of Cypriote origin which showed that from the time of Solomon onwards there was trade between Cyprus and that part of Palestine,—as, indeed, we should expect since there were Phenician colonies in Cyprus; and David and Solomon, as we learn from the Old Testament, were friends of the King of Tyre. In Gezer and Lachish pottery of a still more interesting nature has been discovered, the earliest examples of which go back to the age of the Hebrew patriarchs. This is a tri-chrome pottery, distinguished more especially by its red coloring, which has been traced back to the Hittite region in Cappadocia. Here, then, we have an archaeological proof of Hittite influence in southern Canaan before the age of the eighteenth Egyptian dynasty, and a final answer is given to the scepticism which has denied the historical character of the Old Testament references to the Hittites at Hebron and elsewhere in the time of Abraham. Once more archaeological fact is overthrowing the skeptical conclusion of literary theory."

Vol. XIX of Delitzsch and Haupt's *Assyriologische Bibliothek* will consist of "Materials for a Sumerian Lexicon, with a Grammatical Introduction," by Professor J. D. Prince, of Columbia University. In this work, on which Professor Prince has been engaged for a number of years, and which promises to be of great value, a further concession is made to the contentions of Halévy. Professor Prince confines himself to the philological aspects of the problem, and he makes out a strong case for the assumption that behind the artificial phrases of Sumerian lies a real language, but not necessarily non-Semitic. He admits that, with few exceptions, the most ancient "Sumerian" inscriptions contain "Semitic loan-words" and "grammatical Semitisms." He is inclined to accept the Judea inscriptions, and admits that "in many cases" a Sumerian text represents a "translation of Semitic ideas by Semitic priests into the formal religious Sumerian language."

COLOR OF SKIN. A very interesting contribution to the literature concerning the origin and development of the color of the skin of the races of man is G. Schwalbe's article on "Die Hautfarbe des

Menschen (Mitt. d. Anthr. Ges. in Wein, 1904)". The conclusion reached is that primitive man had originally black or dark-brown hair, and the diminution of hairy covering, which took place in a tropical climate, was accompanied by a corresponding and compensatory increase of cutaneous pigmentation. In cold, northern regions, where the hair-producing power was better preserved, occurred, on the other hand, a diminution of the cutaneous pigmentation except around the *mamme*, etc. According to this theory, such highly-pigmented northern races as the Lapps and Eskimo must have originated in other regions than those now inhabited by them. So, too, tropical races, who are not so pigmented must have been affected by the forests in which they live. One should read in this connection the recent book of Woodruff on the effect of tropical light.

BERBERS AND IBERIANS. The never-ending question of the Berbers and Iberians is approached again by M. Atgier (Bull. Soc. d'Anthr. de Paris, 1904), who discusses the origin and signification of these and related terms. Blackness of hair, not of skin, is denoted by them, according to Atgier, and he seeks their origin in the Kabyle *iberik*, "the blacks," whence the Latin *Iberi* and names derived therefrom. Reduplication of the same Kabyle root gives *Berber* and related words. G. B. Michel (J. Afric. Soc., 1903), in a long article on "The Berbers," gives utterance to some curious ideas. He holds that the Berber is "an inflectional language of the Caucasian type," and seeks to make out a connection between *Berber* and *Bornu*. He derives *Afer* (whence *African*, etc.) from the Berber *ifri* "a cave," and thinks that the earliest inhabitants of this region were all troglodytes.

SIMULTANEITY OF SCIENTIFIC DISCOVERIES. The simultaneity of scientific discoveries, such, e. g., as those of Darwin and Wallace in the field of biology, has been the subject of much discussion. Recently F. Mentré (Rev. Scientif, 1904,) has reviewed the whole matter, giving a long list of such simultaneous discoveries in mathematics, astronomy, mechanics, physics, chemistry, biology, sociology, etc. According to Mentré, these duplicate events are due to "an external and an internal determinism of a social character," and not to accident, free will, etc. There exists for every moment its "scientific milieu of ideas, acts and objects." For contemporary men of science, laboring in the same field, there are "a common soul" and a "common environment." Hence these occurrences. With this paper may be read Professor O. T. Mason's suggestive article, "The Ripening of Thought in Common (Proc. Amer. Philos. Soc., 1904)," in which it is maintained that the possession of thoughts in common, which have come down the ages, gathering impulses as they roll, causes, incessantly and spontaneously, similar words and actions. Striking coincidences cause telepathic influences (and not *vice versa*), if the latter really exist. Altruism in culture is preceded by biology moving in concert.

Mr. Ellsworth Huntington, the American traveller, well known for his remarkable journey through the Great Cañon of the Euphrates, is engaged, together with another American, Mr. R. L. Barrett in an exploration of the Tarim Basin in Chinese Turkestan. The summer and early fall of 1905 were spent in studying the river system in the southern part of the region, with a view to supplementing the work of Dr. Sven Hedin in elucidating its physical history. The resemblance of the basin, with its sand waves, huge shingle beach, and green tide-flats, to an inland sea is striking, and, but for the absence of water, it would be a genuine Mediterranean. The ruins of ancient villages were found to be considerably more numerous and to cover a much larger area than had been expected. Three new sites were discovered, of which the farthest in the desert must have been once the center of a large agricultural population. The abandonment of these places was due, according to local tradition, to the failure of the water supply, which, if correct, would indicate the gradual dessication of Central Asia in historic times. This winter Mr. Huntington proposes to study the Lop Nor region, and in the spring to visit the curious Turfan depression to the north.

SEMITES IN AFRICA.

Rev. Prof. George G. Cameron, D.D., has an article in the February *Expository Times* on "The Masai and their Primitive Traditions." It is a review of Captain Meeker's "Die Masai, Ethnographische Monographie Eines Ostafrikanischen Semitenvolkes." This book of Captain Meeker's has caused some stir in the archaeological world. The author is an officer in German East Africa. While discharging his official duties he has been able to collect a good deal of interesting information regarding the Masai,—a pastoral race whose habitat is the steppes of German and British East Africa. The chief interest of the book is connected with the primitive traditions of the Masai. These so closely resemble the early narratives in the Book of Genesis that Rev. Dr. Cameron is induced to give some explanation of the likeness.

Captain Meeker holds that the Masai are Semites, and that their original home was North Arabia. There seems no reason to doubt that under the pressure of famine or otherwise, Semitic emigrants from Arabia made their way to Africa, especially from South Arabia to the opposite coasts of East Africa. The passage of the Masai is assigned to prehistoric times in other words, to a date prior to 4000 B. C. In this connection, the prehistoric times correspond to the post-exilic period in critical discussion regarding the books of the Old Testament.

For Old Testament critical investigation the importance of Captain Meeker's views is obvious. The Masai are supposed to arrive in the neighborhood of the equator not later than 4000 B. C. According to our present information, that is a millenium and a half before Babylonian influence began to act on the ancestors of Israel, to whom we owe the early narratives of the Old Testament.

GIANT RACES IN ARABIA PETRA.

BY HENRY PROCTOR, M.R., A.S.

In the Book of Genesis there are two accounts of the Origin of Man. These have long been distinguished as the "Elohistic" and the "Jehovistic" accounts. The Elohistic narrative is without doubt the earliest, and is an epic of unsurpassed grandeur dealing with the first appearance of man on the earth, or as some think, with a reinhabitation and the formation of the present Kosmos. The Jehovistic on the other hand is in every way much more circumscribed, and deals only with the origin of one race, that is, the Adamic or Caucasian Race, and touches others only in an incidental way. All those nations whose genealogy is traced back to Adam are of the Caucasian Race, sometimes called the White Race, although among them there are entire populations whose skin is as black as that of the darkest negro, such as the Bishareen and other tribes inhabiting the African coasts of the Red Sea, and the Black Moors of Senegal. The Aryan Hindu also is sometimes of darker hue than the true Negro, and even the Jews vary from the Black Jews of the oasis of Waregla to those with light hair and blue eyes. So that all variations of color may be found within the limits of one race, but this fact throws no light at all on the origin of *distinct* races, which it is easy to prove here existed.

Giants were in the earth in those days, and the Bible afterwards indicates the gigantic Anakim as descended from the Nephelim. Others of these prehistoric giant races, were the Rephaim, the Emim, the Amalekites, the Zamzummin, and the Horites. Amalek is said to have been (Num. 24:30) "the first (reshith) of the nations." And the Horites who preceded the Edomites in their occupation of Mount Seir, were no doubt the excavators of the Rock Dwellings which are graphically described by Keith, as abounding in Petra, the ancient metropolis.

"The base of the cliff (he says) is wrought out in all the symmetry and regularity of art, with colonnades, and pedestals, and ranges of corridors adhering to the perpendicular surface, flights of steps chiselled out of the rock; grottos in great numbers, some excavated residences of large dimensions (in one of which is a single chamber sixty feet in length, and of proportionate breadth). The rocks are hollowed out into innumerable chambers, of dimensions, whose entrances are variously, richly, and often fantastically decorated with every imaginable order of architecture." These were the dwellings of the troglodyte Horites which were afterwards occupied by the Edomites. From Genesis 14:5, *et seq.*, we learn that the power of these prehistoric giant races was reduced by Chedorlaomer or Kuder-Lagamar, King of Elam, in alliance with the well-known Khammurabi (Amraphel) King of Shumir, Eri-aku (Arioch) and Tudghula (Tidal) which may account for their disappearance from the pages of history and the peaceable possession of Mount Seir by the Edomites; of Ar, the land of the Emim, by the Moabites, and the land of the Zazim by the Ammonites. All

these were giant races like the Anakim and Rephaim, who were descended from the prehistoric Nephilim (Gen. 6-4 Numbers 13:33 R. V.). Of the Rephaim we are told that the name of their capital was Ashteroth Kafnaim, which indicated that they were worshippers of the two horned Ashteroth or Astarte, that is, moon-worshippers, which is probably the oldest kind of worship known. We learn also of the Anakim, that their chief city was Hebron, which was called originally Kirjath-Arba, from Arba the father of Anak, and that it was built seven years before Zoan in Egypt. Now Zoan was certainly at one time, the capital of Egypt, because it gave its name to the whole country (Isaiah 19:11,13) and this must have been before the reign of Menes, who removed his capital from "This" about 800 years before the time of Moses to Memphis. It would appear then that the first capital of Egypt was Zoan, which was built seven years after Kirjath-Arba or the city of Arba. This would carry back the rise of the Anakim to an enormous antiquity and so of all the Nephilim, or primitive inhabitants of the earth.

THE WALLS OF CONSTANTINOPLE.

Constantinople may be said to stand upon two continents for the promontories upon which the Capital lies are divided by the Bosphorus.

The harbor has been called the Golden Horn. "It is like a stag's horn," Strabo says, "for it is broken by wavy creeks like so many branches." If the figure of the harbor resembles the stag's horn, the general form of the city of Constantinople, resembles an ancient drinking horn. Constantine aimed at building his new capital on seven hills, a counterpart of the ancient city of Rome.

Under Constantine the site of the city was more than doubled. It is said that forty thousand Goths were employed in raising and afterwards manning these works. The seven gates separate the eight cohorts, each of five thousand men.

During the appearance of the Goths and Huns under Attila, the Theodosian Wall was raised. Upon the completion of these walls, there ensued a double arrangement of gates; the town gates communicating with the public roads alternated with military gates which opened upon the terraces only. These seven town gates communicated with the seven gates of Constantine's wall, each by a broad street. They were opened in peace and shut in time of war, and the bridges connecting with the country were taken down at the approach of the enemy. The military gates had no bridges leading from them, they served only to give egress to the garrison when it was required to work the engines of war planted upon the terraces outside and below. The land-ward walls of Constantinople bear marks of the labor of many hands and represent different and distant epochs.

Their construction is unique. The two inner lines are furnished with a series of towers about fifty feet apart. As the gaunt array

of castles drops into the valley, or climbs the hill beyond, one may decipher some of its obscure inscriptions on marble or in tile-work.

Equally remarkable with the fortifications is the system of large cisterns, as one seems to have been annexed to every considerable monastery and place. They may be reckoned the more ancient portion of the city, for while the buildings above ground are scarcely any of them older than the time of Justinian, the cisterns date from the time of Arcadius, Justinian and Constantine.

Mahomet II built his new palace, the seraglio, on the site of the Acropolis, a situation especially favorable for his purpose, as it



THE WALLS OF CONSTANTINOPLE.

afforded the combined advantages of a lovely prospect, a perfect retreat from the noise of the city, and a place for observing all the movements of the harbor. In erecting it, he followed the three divisions made by the Byzantine emperors. (1) The defensive part held by the guards, called Chalce. (2) The place used for receptions and for the Hippodrome. (3) The private chambers occupied by the imperial household. The three corresponding portions of the Ottoman palace are distinguished by their several gates.

THE LONG-LOST MANICHEAN BIBLE.

The students of comparative religion will be interested in Prof. Bloomfield's account in *Harper's* of the recent discovery of portions of the long-lost Manichean Bible. These fragments were a part of the rich archaeological treasure unearched by Dr. Alfred Grünwedel at Turfau, in the extreme east of Chinese Turkistan under the auspices of the German government.

They are over eight hundred in number and are the only known remnants of the literature to which they belong. During the past summer, Prof. Bloomfield spent several weeks in Berlin and had an admirable opportunity to examine the fragments with the constant assistance of Dr. Grünweld himself and of Dr. E. W. K. Müller of the Berlin Ethnological Museum, an eminent Orientalist of the younger generation.

Biblical scholars will be interested to see the large Christian element which appears in these fragments. Indeed, in some passages, Mani seems to be wholly identified with Christ, though elsewhere Christianity is vigorously assailed.

Dr. Grünweld has returned to Turfau to continue his quest, carrying with him a grant of 83,000 marks, and it is confidently to be hoped that large additions may be made to his already remarkable discovery.—*The Nation*, March, 1906.

ORIGINAL GREEK MANUSCRIPTS.

The most serious handicap to the American student of classical antiquities is the lack of original materials in this country. It is true that the archæologist, thanks to liberal gifts from a few sources and to a watchful, progressive spirit in the management of some institutions, now has opportunities and privileges which, though not comparable with those enjoyed by his European colleague, are already considerable and increasing every year. But the pressure of this lack of original materials is felt most sorely by the student of the literary treasures of Greece and Rome, almost entirely cut off, as he is, from the manuscripts with which every scholar across the Atlantic may become familiar. It would be easy to multiply examples of students forced to complete in Oxford, Paris or Rome researches begun in American universities, or obliged to entrust to the hands of others the work of examination and collation, or compelled to lay aside most interesting studies on account of the insuperable obstacles of distance, time and expense.—Basil L. Gildersleeve.

RAILROADS AND ELECTRIC LIGHTS IN THE HOLY LAND.

The Sultan has recently granted the concession for the electrical lighting for the City of Jerusalem and for a trolley system which is to be practically an inter-urban road, extending to Bethlehem, to Bethany, Jericho and the sacred sites that marked the tomb of Moses.

Damascus also is to receive a complete system of electric street cars which will be supplied with power by the Abana River.

Beirut, the most progressive and modern city in Syria, is also moving to get a concession for electric lighting and cars.

A number of religious journals are protesting against this desecration of sacred places, deploring that the Jerusalem and Jericho tracks must go directly over the Mount of Olives.

THE RAINBOW BIBLE.

In his initial lecture, Greece and Israel, Prof. Butcher, who is quite alive to the charm of the Authorized Version, has recourse more than once to the Revised Version. Now men of my time and training are so steeped in the Authorized Version that it colors not only their style but their thought. They cannot get rid of it; few of them would get rid of it if they could. For them, as for Mathew Arnold, the superinduced poetry is a satisfying portion, and some go so far as to sympathize with the old lady who went into ecstasies over the beautiful expression "shadowing shroud," although she had not the slightest notion what "shadowing shroud" meant. But when the time comes to forsake the Authorized Version,—and the time does come to the scholar—I, for one, do not stop at the margin or at the Revised Version, but make for the pot of gold at the foot of the Rainbow Bible.—Basil L. Gildersleeve.

CHINA AND THE MISSIONARIES.

Mr. Conger, who knew China before and during the Boxer outbreak, and Doctor Morrison, the London Times correspondent, with other authorities, join asserting that trouble is inevitable.—*Philadelphia Ledger*.

It is claimed that nothing but force appeals to the Oriental mind, and that anything that looks like weakness or indecision is at once a cause for overt proceedings. The Chinese government is likely to be stirred to action by the evidences that the other powers are getting ready to protect their citizens in the empire, and in this way the necessity for outside interference may be obviated.—*Pittsburg Post*.

THE PHILIPPINE BUREAU OF SCIENCE.

of which Dr. Paul C. Freer is director, has established a new journal to be known as "The Philippine Journal of Science," ten numbers a year. Subscription price, five dollars per year. Single copies, 75 cents. This bureau has issued during 1902 and 1905 thirty-six bulletins which have been sent free on application.

The Oxford University Press (H. Frowde) has nearly ready Mathew Arnold's "Merope," edited by J. Churton Collins; to which is appended R. Whitelaw's translation of the "Electra" of Sophocles. It will be followed by others containing some leading Greek tragedy, translated and edited in the same manner.

HARVARD STUDIES IN CLASSICAL PHILOLOGY.

Vol. XVI., has two papers, one on the dramatic art of Aeschylus by Chandler R. Post. Another on the nature and origin of the Indo-European inflection.

SCULPTURED PIPES.

The most interesting class of pre-historic relics to be found in the United States, is that which may be embraced under the general head of aboriginal pipes. These are usually made of stone, and are among the finest specimens of aboriginal art. In fact, they may be classed under the head of sculptured art as appropriately as under the head of archaeological relics.

It was the discovery of carved pipes that first attracted the attention and aroused the interest of the people of this country, in pre-historic relics. This discovery was made by the Messrs. Squier and Davis, who had become very much interested in the mounds, and earth works, situated in the southern part of the State of Ohio.

It was while exploring one of the enclosures, namely the one called "Mound City," that they came upon no less than twenty-four mounds within the compass of thirteen acres. The principal ones were found to contain altars, which proved beyond question that they were "places of sacrifice." It was upon these altars that they found implements of copper and stone, a large number of spear-heads, some of them chipped out of quartz and garnets, also obsidian arrow-heads, copper gravers or chisels, a large quantity of pottery and two hundred carved stone pipes, and a number of ornaments of copper covered with silver. The following is the description of the pipes:

"The bowls of most of the pipes are carved in miniature figures of animals, birds, reptiles, etc. All of them are executed with strict fidelity to nature, and with exquisite skill. Not only are the features of the various objects represented faithfully, but their peculiarities and habits are in some degree exhibited. The otter is shown in a characteristic attitude, holding a fish in its mouth; the heron also holds a fish; and the hawk grasps a small bird in its talons, which it tears with its beak. The panther, the bear, the wolf, the beaver, the otter, the squirrel, the raccoon, the hawk, the heron, the crow, swallow, buzzard, paroquet, toucan and other indigenous and southern birds; the turtle, the frog, toad, rattlesnake, etc., are all recognized at first glance. But the most interesting and valuable in the list are a number of human sculptured heads, no doubt faithfully representing the predominant physical features of the ancient people.

It was this discovery of sculptured pipes, which led to the opinion that a mysterious people once lived on the continent, who were called "The Mound-Builders," and that they were highly civilized, but had long since disappeared, and the well known Indian tribes had taken their place. This opinion has been overthrown by later discoveries, and yet it leaves an air of mystery about these speci-

mens of art, for no Indian tribe has yet with any certainty been identified as the producers of these sculptured objects. The Indians upon the Northwest coast have exhibited great skill in carving both animal and human figures into the Totem poles, but none of these carvings are at all equal in delicacy and finish to the specimens which have been found in the mounds.

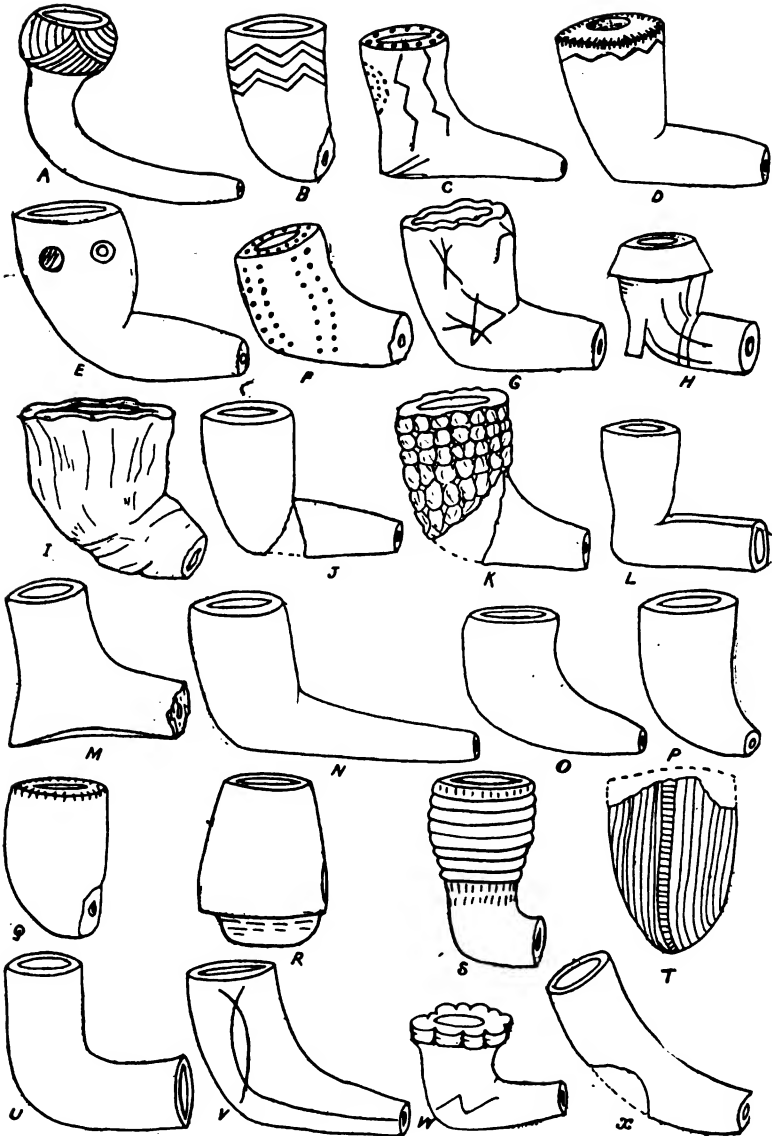
This may be said, however, that the Aborigines which were inhabiting the continent at the time of the discovery, were using tobacco and had various kinds of pipes in which they smoked the weed. They were also found to be cultivating corn in great quantities, and were living in villages, and had permanent settlements. In fact there were three products of the soil which were peculiar to America, and the Aborigines may be said to have given them to the world, viz., potatoes, corn and tobacco. Of the three tobacco was the only one which seems to have affected the art of the world, for pipes became one of the most common and widespread articles known to the human race. Still these three products have enriched the nation which now occupies this continent and at the same time have added to the comfort and the support of the nations of the old world.

It is owing to the fact that the use of tobacco has become so wide-spread that great interest is taken in the description of pipes which have been discovered in America and which belong to the prehistoric inhabitants. We shall therefore give a full chapter to the description of them, taking our information from the various books and pamphlets which have been published upon the subject, giving full credit to the authors,* the titles of which are given below:

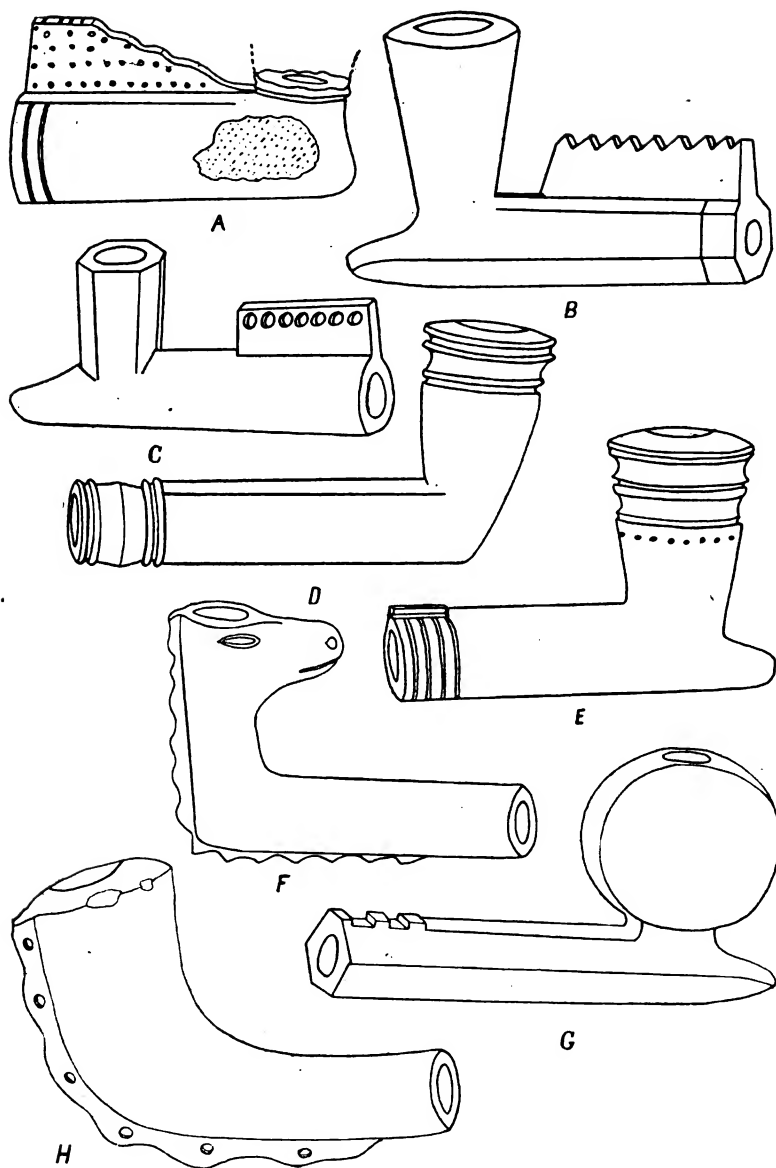
The value of these books and pamphlets consists not merely in the careful description of the pipes but in the numerous wood-cuts and plates which bring them before the eye. Another advantage is that they show the distribution of the sculptured pipes as well as their different shapes. The pamphlet by Mr. McGuire describes those of Ohio and Pennsylvania and the south and east of the Ohio river. The pamphlet published by Mr. West shows the pipes which have been discovered in the state of Wisconsin.

The classification of the pipes is quite important for by this means we shall be able to understand not only their shape and finish but to a certain extent realize the artistic taste and the mechanical skill of those who sculptured them. It should be said that as specimens

*"Ancient Monuments of the Mississippi Valley," by Squier & Davis. Published by the Smithsonian Institution, 1847, in "Smithsonian Contribution to Knowledge," Vol. I. "Primitive Industries," by Dr. C. C. Abbott. Published by Geo. A. Bates, Salem, Mass, 1881. "Antiquities of the Southern Indians," by C. C. Jones. D. Appleton & Co., 1873. "Antiquities of Tennessee," by Gen. Gates P. Thurston. Robt. Clark Co., Cincinnati, 1897. "Prehistoric Implements," by W. K. Moorehead. Robt. Clark Co., Cincinnati. "Archæological History of Ohio," by Girard Fowke. Ohio State Arch. & Hist. Society. "Reports of the Peabody Museum," by Prof. F. W. Putnam. Peabody Museum, Cambridge. "Hand-book for Beginners," Thomas Wilson. Curator Smithsonian Institution, Washington, D. C. "Wisconsin Archæologist," Vol. IV, Nos. 3 and 4. Chas. E. Brown, President. Pamphlet prepared by Geo. A. West. Description of relics in his private collection. "Pipes and Smoking Customs of the American Aborigines," based on material in the U. S. National Museum. By Joseph D. McGuire. 1897.



TRUMPET PIPES.



CALUMET PIPES.

of aboriginal sculpture, there is nothing equal to them on this continent and yet, strange to say, no one knows what tools were used; no one even knows the process by which they were brought into their remarkable shapes.

It will, of course, be understood that the pipes made out of pottery involved less skill than those made out of stone, yet the hands which could mould them into shapes of familiar animals were as skillful in delineating forms as those which cut from stone the same objects.

I. We shall begin with the trumpet pipes. These are more numerous in the state of New York than elsewhere and are frequently made out of clay.

Some have taken the ground that they were made after the advent of the white man for they resemble that ancient musical instrument which was first hammered into shape by the inhabitants of Norway but which in turn bore the shape of the hunting horn which came from a civilization antedating that of Europe.

Rev. W. M. Beauchamp, one of the best authorities in the country on the Iroquois pipes, says, "They (the Iroquois) rarely made stone pipes until they had metallic tools."

Mr. McGuire says, "The Iroquois pipes present many unusual characteristics and evince local influence exceeded by none on the continent unless it be the carved-base mound-pipes of Ohio. The trumpet pipes vary greatly in the curve of the outline and exterior ornamentation. They are not as a general rule carved out of stone but are made out of clay and are called pottery pipes. Although most numerous in the state of New York, they are found also in Wisconsin, Ohio, Pennsylvania and Massachusetts.

Mr. George A. West describes the trumpet-shaped pipes and has furnished a plate which brings before the eye their shape and their ornamentation. It will be noticed that the ornamentation is generally suggestive of the sun and moon and the heavenly bodies, thus giving the idea that there was a religious sentiment connected with the use of the pipe. This idea is confirmed by the fact that when Marquette approached the wigwam of the chief who lived near the mouth of the Des Moines river he was met by the chief who first lifted his pipe toward the sun and then toward the points of the compass, exactly as did the chiefs seen by De Soto as he led his army through the Gulf States on his way to the Mississippi river.

The following is a description of the trumpet pipes in the collection of Mr. West and represented in the plate furnished by him:

A. Iroquois pipe of black pottery. B. Red pottery, bowl ornamented with zig-zag lines. C. Red pottery, with ornamentation representing lightning and circles for the sun. D. Has thick walled bowl with ornamentation on edge from Waupaca county. E. Brown pottery with figures representing the sun and moon, from Marquette county. F. Same county, has bowl ornamented around top with dots and perpendicular lines of dots on the sides. G. Dark pottery, ornamented with scalloped rings and incised figures from Dane county. H. Yellow pottery, from Jefferson county. I. Black pottery, rudely moulded, Calumet county. K. Black pottery, ornamented to represent an ear

of corn, from Marquette county. L. Glazed pottery, with square base intended for stem, "showing white man's influence." M. Red pottery, with basal projection in front, from Ozaukee county. N. Brown pottery, found in a mound in Crawford county; four inches long. O. Also brown pottery, from Marquette county. P. Red pottery with short stem; same county. Q. Ornamented with dots around top of bowl. R. Peculiar in having a keel; from Winnebago county. S. Dark pottery, rings around bowl like Iroquois pattern, from a gravel pit, Marquette county. T. Peculiar ornamentation; same county. U. Red pottery; stem and bowl of same size. V. Red pottery with incised curved lines; Calumet county. W. Yellow pottery; scalloped flange around bowl, base with emblem of lightning. X. Trumpet-shaped; Kenosha county.

II. Calumet Pipes. Mr. West has described a series of pipes which he ascribes to the Sioux. These can hardly be called trumpet pipes for they have a sharp turn at the base. He calls them Calumet pipes. They are made of steatite or catlinite. They were found in different counties in the state of Wisconsin.

The following is a description of these pipes:

Fig. A. Blue limestone; has appearance of great age; ornamented with thirty tally marks on one side and twenty-seven on the other; from Washara county. B. Same county; four inches long, two and three-fourths high; stem octagonal in shape with projection above stem, which has seven notches. C. is from Door county, is four inches long, octagonal bowl with projection in front of bowl; ridge above the stem is perforated with seven holes; found at Red Banks. D. Beautifully polished; stem and bowl ornamented with rings in relief; top and bottom of stem is flattened; from Winnebago county. E. Bowl and stem round with flattened base, several rings and line of dots around bowl projection in front of stem. F. Has bowl carved to represent the head of an animal, a projection beyond bowl and below stem; duplicates to this specimen are in Mr. S. D. Mitchell's collection, Ripon, Wisconsin, and in the Logan collection, Beloit College. G. is from Crawford county; bowl circular and stem octagonal in shape; six inches long, two and a half high. H. is like a trumpet pipe; has a scalloped keel or comb in front of bowl and under stem; each scallop is perforated.

Mr. West says "No pipe was ever regarded by the American aborigines with greater reverence and respect than was the Calumet. It was used in the ratification of treaties and alliances, in the friendly reception of strangers as a symbol in declaring war or peace and afforded its bearer safe transport among savage tribes. Calumets were made of steatite, limestone, sandstone and granite, but the majority of them were made of catlinite. This name comes from George Catlin who, in 1835, visited the pipe-stone quarries of Minnesota. He had previously found catlinite in the hands of the savages of every tribe and of nearly every individual in the tribe. He says from the very numerous marks of ancient and modern diggings it would appear that this place had been for centuries resorted to for the red stone and the Indians have long held the place in high superstitious estimation. It has also been the resort of different tribes who have made their regular pilgrimages here to renew their pipes."

It is to be noted that the Sioux have occupied the region where this quarry is situated but the material can be found in all parts of the country as far away as the Atlantic coast and even in the Southern States.

III. Diminutive pipes. There is a class of pipes which resembles the Calumet but lacks the peculiar comb above the stem and other characteristics. They are smaller in size and most of them are made for the reception of a stem. They are probably quite modern. The

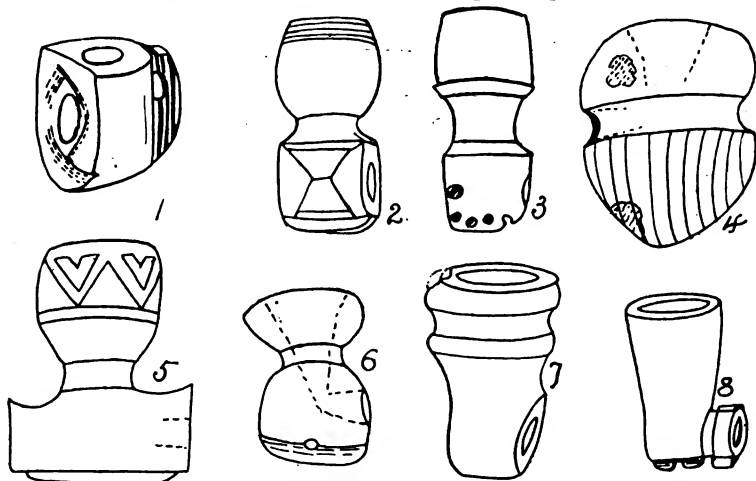


DIMINUTIVE PIPES.

following is a description abridged from Mr. West's account of them :

A. Ornamented with emblems of the moon and lightning. C. From a grave, ornamented by a comb on top of stem. D. has perpendicular slot at outside end of base and has a front which is sharp almost to cutting edge. I. Ornamented with number of rings. K. Ornamented with perforated wing on top of stem. L. From a mound, simply roughed out. O. From mound, probably of great antiquity; the wall of its bowl is worn thin from use. P. Also from mound in Waukesha county; it is an unfinished specimen. Q. is of steatite, very old in appearance.

Mr. McGuire says, "As far south as the borders of Kentucky and extending as far north as the Black-feet wander in Labrador, and across the continent almost to the Pacific Ocean, is found a type of pipe which has a bowl in shape not unlike an inverted acorn, which rests upon a keel-like base and extending beyond the bowl an inch or more on each side. Through the top of this keel is drilled a stem-hole until it intersects at right angles the base of the



STEMLESS PIPES.

bowl. It is surprising to find evidence of the use of the file on many pipes of stone which are supposed to belong to the most primitive periods. The pipe of the Dene, who live between the Frazier river and Cascade Range, is identical in type with these pipes.

IV. Stemless Pipes. Another class of pipes has been described by Mr. West. He calls them Mic-mac pipes. The Mic-mac Indians have occupied Nova Scotia, Prince Edward Island, adjacent parts of Quebec and Newfoundland, during historic times.

This kind of pipe was in use among them at the time of the advent of the whites. They are not known to have occupied any Wisconsin territory but they belong to the great Algonquin family, and the distribution of the pipes can be accounted for by barter and trade.

The cut represents some interesting forms among the Mic-mac pipes. It is not claimed that they are very old.



MONITOR PIPE WITH FLANGED BOWL.

V. Monitor Pipes. The next class of pipes, the Monitors, get their name from the resemblance to the armored warships, the monitors which did such remarkable service during the war of the rebellion. These pipes have a long flat base with bowl which varies in shape, but generally resembles an ordinary spool, having a projection above and below the bowl.

The orifice is quite wide at the top, but tapers to a point in the stem where it is met by the boring which passes through the stem.

There are many such pipes scattered throughout the various collections in the United States. Some are found in England and other parts of Europe. Mr. McGuire says, "There is no pipe more

striking and better marked than the Monitor, which is widely distributed in the eastern United States, being often found in mounds and other primitive burial places. . . . The delicacy of its finish, as well of its outline, is surpassed by no American pipe. The material from which they were usually made is a chlorite, or steatite, or sometimes serpentine. . . . They vary in color from nearly white to jet black, being usually highly polished and having remarkably thin bowls. The Monitor pipe is one upon which more care has been taken on the boring bowl and stem and polishing the

surface than any other type of pipe on the continent, not excepting the famous mound pipes.

They vary in length from three to eighteen inches with a diameter from three-fourths of an inch to one and three-fourths inches. The stem-hole rarely exceeds one-eighth of an inch in diameter, and are bored with remarkable accuracy. . . . This remarkable accuracy is almost proof positive that the drilling was done with steel tools." This is a conclusion which Mr. McGuire has drawn, but there are many archæologists and collectors who differ with him on this point. For the same reasoning would lead to the conclusion that nearly all the pipes which have been found in the Mississippi Valley were post-Columbian, for the same skill was exercised in boring a hole through the stem and making it meet the opening in the bowl as is exhibited in the Monitor pipes.

Mr. McGuire quotes Adair, who was Indian agent among the Cherokees at an early date and was familiar with their pipes and their customs. It is a question whether his description will apply to the Monitor pipes.

Adair says that "The Cherokees make beautiful stone pipes, the best of any of the Indians, for their mountainous country contained many sorts of soil proper for such uses. They easily formed them with their tomahawks and afterwards finished them with their knives; the pipes being of very soft quality until they are smoked and used to the fire, when they become quite hard."

The Monitor pipes have a flat base, bowl being set in center, while the base projects both toward the smoker and beyond the bowl. There is generally a flat projection at the top of the bowl which adds to the gracefulness of the fig-



MONITOR PIPE WITH PLAIN BOWL.

ure. These Monitor pipes are somewhat rare and are eagerly sought for by collectors. They are found in West Virginia, in North Carolina, in Tennessee, a few of them in Michigan and a number in Wisconsin.

Mr. West has quite a number of these Monitor pipes in his collection. One of these was found in Eagle township, Richland county, a region where emblematic mounds are numerous. This pipe is in the Logan collection of Beloit college.

Mr. West says: "This is certainly one of the finest examples of the straight base Monitor pipe ever found in Wisconsin. It is nine inches long, two and three-quarters at base, with a bowl cavity of three-fourths of an inch in its greatest diameter.

Another pipe in Mr. West's collection is from a mound in Vernon county. It is the same length and form as the last described. Another Monitor pipe was found in Marinette county; another, four inches long, from Winnebago county, is in Hon. J. J. Pickett's collection. Another, of mottled steatite, is five inches long, the base an inch wide, the bowl cavity made with a solid pointed drill, the stem-hole having a diameter of half an inch; it shows the striations distinctly.

There is no evidence of metal tools having been used in its manufacture. A duplicate of this is in Mr. West's collection. It is a surface find from Crawford county. Another was taken from a mound near Packwaukee, a region where emblematic mounds are very common.

Another fine Monitor pipe was found on the surface in the town of Wauwatosa, Milwaukee county. It is a greenish steatite and almost translucent. It has a straight rounded base five and three-quarter inches long and two broad. The bowl resembles a spool and is two and one-half inches high with a projecting flange below and above. The bowl cavity is an inch wide and was made with a sand drill. It is peculiar in having the bowl near the end with the handle tapering to a point at the other end. It is doubtless the finest example of its class ever obtained in the state.

Another fine specimen is in the Logan collection. It is also of greenish steatite and has the bowl near the stem end. It is five inches long and is peculiar in having the flange of the bowl cut off where it would come in contact with the smoker's face. This pipe was plowed up on a farm at the foot of Lake Koshkonong, a region where emblematic mounds abound.

Another pipe is precisely the same shape as the one above described. It is of catlinite. It was found in Barron county.

Another similar pipe was found in Winnebago county. Another fine example is in Mr. H. B. Hamilton's collection. It came from Waupaca county. It is catlinite. It is three inches long with spool-shaped bowl in the middle of its rounded base.

General Thurston describes several disk-pipes, one of which was found in a stone-grave cemetery, near Nashville, Tenn. He says the bowl is perfect but the large thin circular disk that surrounded the stem-hole is broken. Another disk-pipe was found in Kentucky which shows the form of the original disk. It was probably the fashionable smoking pipe of the day in certain sections. The disk was doubtless a mere conceit used as an ornamental handle by the Indian dandies of the time. A pipe of the same general form, made of limestone, was found near Chattanooga, Tenn.

V. Curved Base Pipes. There is another class of pipes that resembles the Monitor but differs in having a curved base.

The first specimens of these pipes were discovered by Mr. E. G. Squier while excavating one of the mounds in "Mound City." They all have the curved base, but the bowl different kinds of animals and birds. The swallow, the toucan, the toad, and an unfinished



Fig. 167



Fig. 168



Fig. 169



Fig. 170

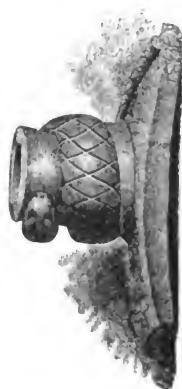


Fig. 184

CURVED BASE PIPES.

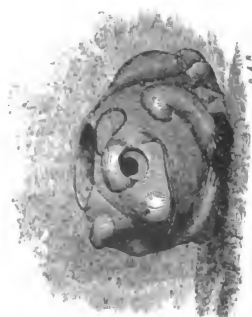


Fig. 183

pipe also represents the toad, and a fragment of a pipe represents the frog. This specimen was carved in white limestone and was broken by fire. Another pipe represents a rattlesnake coiled around the bowl. The figure of the snake has a broad flat head and the body is singularly marked: Carved in porphyry. Mr. Squier says the sculptures of the toad are very truthful, the knotted, corrugated skin is so well represented that if placed in the grass would be mistaken for the natural object.

The question about these remarkable pipes is as to the people who were skillful enough to give them such perfect shapes and such a fine finish. Archeologists differ on this point.

Mr. William Wallace Tooker says, "The discovery of the Monitor pipe with curved base among the effigies of Wisconsin and in the mounds of Ohio, I regard as an additional link in the chain of evidence that they are of Algonquin manufacture."

Dr. Thomas Wilson contends that the objects wrought by the artists' skill revealed familiarity with the animals of Southern and tropical latitudes. The materials from which they were made include mica from the Alleghanies, obsidian from Mexico and jade and porphyry from still farther south. Some of these pipes are skillfully polished. Those in shape of the human head as well as those in the shape of birds and animals are remarkably well executed.

Mr. McGuire says that the Monitor pipe does not often appear west of the Ohio, but is found in Tennessee and North Carolina, but Mr. West has in his own collection a large number of both Monitor and curved base pipes found among the effigy mounds of Wisconsin. Such pipes are not found on the shores of Lake Erie, Lake Ontario or on the St. Lawrence, but they are found on the Ohio River and Mississippi River as far north as the State of Wisconsin.

Prof. Cyrus Thomas attributed this form of pipes to the Cherokees, but the fact that the Dakotas passed through the regions along the Ohio River on their way to the region west of the Mississippi, and along with them went the Winnebagos, who were a branch of the same stock, and settled in Wisconsin in the region where so many Monitor and curved base pipes have been found, would explain the presence of the pipes in both regions.

VI. The Disk pipe is worthy of study for its shape is so novel. It has no bowl, but instead of the bowl there is a flat disk with small and shallow orifice which leads into the stem or base, but the cavity is so shallow and so small that it would be impossible to hold tobacco to any amount. This has led some to conclude that the stem of the pipe was placed in the disk and the tobacco was placed in the end of the tube called the base of the pipe.

As to the distribution of the Disk pipe, it should be said that they are found in Ontario and Tennessee, Illinois, Wisconsin, but have not been found to any number in New York or in the Southern States or West of the Mississippi River.

Mr. McGuire thinks that the shape of the disk is so suggestive of the Jews harp as to indicate that this pipe was modeled after this musical instrument and that all these pipes were made after the advent of the white man.

A modification of the disk pipe is found in Kentucky, in Mis-



DISK PIPE.

souri and throughout an extensive territory surrounded by the Great Lakes, a region which was inhabited by the Iroquois and other tribes of the same stock.

The peculiarity of this pipe is that the flat disk is placed upon

the base, which has the character of a tube, but extends beyond the disk, leaving a projection which might be used as a handle. This confirms the supposition that the disk was really the bowl.

General Thruston speaks of two specimens of this type made of catlinite. In the Douglass collection there are six pipes of this character. Mr. David Boyle speaks of two from Ontario, one of



HANDLED DISK PIPE.

them made of catlinite. A specimen was taken from Mt. Carmel, Ill. A highly polished specimen was found in a mound near Greenville, Ill., and a badly weathered lime-stone specimen was found in Union county, Kentucky.

VII. The Handled Pipe. This is a peculiar class of curved pipes which is quite elaborate in shape, a specimen of which is shown in the cut. It has a disk, but there is an orifice through it which was apparently designed as a handle. The bowl itself is carved in shape of a bird. This pipe is in Mr. H. P. Hamilton's

collection at Three Rivers, Wis. There are several specimens of handled pipes; two in Mr. West's collection, one the Logan collection Beloit college, another in the collection of the Wisconsin Historical society.



TUBE PIPE.

VIII. Tubular Pipes. This is a class which is quite widely distributed and cannot be confined to the Mound Builders' territory. It has been a wonder with some as to what use was made of it. Some have imagined that it was used as a telescope. Others have regarded it as a cupping instrument, and still others call it a pipe. Relics similar to this are found among the Hupas and among the Pahutes of the Sierra Nevadas. The following is a description given by one who has seen a medicine-man treating a patient with one of these tubes:

The mouth of the tube was placed on the skin above the congestion and the skin was drawn up by the medicine-man while another sang the chant or prayer. Sometimes the medicine-man keeps this treatment up all night with short intervals of rest; only a strong man can endure the strain of such treatment.

Many other kinds of pipes might be mentioned and one is especially deserving of notice. It consists of a shallow bowl which is covered with knobs resembling huge warts. It has a short stem. It bears the name of the "Southern Mound-Pipes." It is found on the Coast of Georgia in the Etowah Mound in that State, in North Carolina and many other localities. This pipe has been described by Mr. Clarence Moore, Mr. McGuire and other collectors but its distribution was mainly confined to the Southern States.

Other kinds of pipes abounded in the arid regions of the West, along the Pacific Coast, in Mexico, Central America and Peru but it would take a full chapter to describe them and the subject therefore must be left unfinished.

Book Reviews

Band II., Heft 4, of the RELIGIONSGESCHICHTLICHE VERSUCHE UND VORARBEITEN, edited by Drs. Dieterich and Wünsch, consists of a dissertation by Dr. G. Blecher entitled *DE EXTISPICIO CAPITA TRIA*, in which the author discusses the ancient method of prophesying by the inspection of a victim's entrails. He has made a wide collection of passages bearing on the subject from classical writers, and illustrates them by customs practiced among primitive people at the present day. Prof. Bezold contributes an appendix on the evidences of similar practices among the Babylonians.

Professor E. König has issued a new pamphlet, "The Babylonian Captivity of the Bible Proved to be true." Besides answering Prof. Delitzsch's assertion in the last edition of his celebrated "Vorträge," he has also directed himself against Dr. A. Jeremias's new work on the subject. Prof. König draws the reader's attention to the works of Dr. Stucken, the real founder of the new astro-mythological system of historiography.

The Babel-Bible controversy is still creating new pamphlets on the close connection of Old Babylonian ideas with modern civilization. Dr. H. Pudor has recently published a pamphlet of 59 pages, entitled, "Babel-Bibel in der Moderne Kunst," in which he endeavors to show in a number of good illustrations, the great importance of Babylonian art in general. Scholars, however, will not agree with Dr. Pudor, when he attempts to show Japan to be "a modern Babel-Bibel Land," and he even compares certain Japanese characters with the cuneiform writing.

The recent number of *DER ALTE ORIENT* (7 Jahr., Hft. 2) consists of a paper by Dr. H. Winckler on "Die Euphratländer und das Mittelmeer." The author reviews the points of contact between Babylonia and Assyria on the one side, and the races of the Mediterranean on the other. With regard to the earlier period, however, Dr. Winckler reproduces the long exploded theory that Mycenaean civilization was widely influenced by Babylonian culture through the medium of Sargon of Agade. The article occupies thirty-two pages, and has three illustrations.

"*DIE HIEROGLYPHEN*" is a bulky quarto of 238 pages, by Dr. A. Eichhorn, recently published at Berlin, in which he gives a full decipherment of three assumed systems of writing of the Maya hieroglyphics of Central America. This is all very well, but at the same time Dr. Eichhorn gives us a discussion on the cosmography of the Maya which differs as widely as possible from any adopted by the philologist. Dr. Eichhorn's book, however, will be a stimulus to the workers in the same field and thus reward him for his painstaking labors.

A number of Palmyrene inscriptions procured by Prof. Puchstein in recent years, have been made the subject of an exhaustive study by Dr. M. Sobernheim and will essentially add to our knowledge of that interesting Aramaic idiom. Among them some bilingual texts are especially remarkable, the Greek legends of which have been explained by Dr. Puchstein himself. Excellent autotype reproductions of the inscriptions accompany the scholarly work.

Contents of the *Annales du Service des Antiquités de l'Égypte*, Tome VI., fasc. I.

M. R. Fourteau, Notes on the navigation in the cataract of Assuan (the channels used before the modern regulations). Schweinfurth, Researches on the stone-age in Upper Egypt (many pictures, tracing almost all transitions found in European stone implements). Robert Mond, Report of work in the necropolis of Thebes during the winter of 1903-4 (clearing of a number of tombs, partly known, partly new; some very good results; plates with interesting funerary texts).

Fasc. 2.—Daressy, Representation of an Egyptian horseman (and) An Archaic building at Nezlet Batran (tomb contemporary with "King Serpent"). Alexis Malion, S. J., A new Coptic inscription from Philae (tomb-stone); Howard, Carter, Report of work done in Upper Egypt, 1903-1904 (repairing various royal tombs and making them accessible); shrine of Nectanebo and monument of a king Horsiesi at Kuft, etc.). Legrain, Notes of inspection (3 new royal names, etc.); G. Lefebure and L. Barry, Report on excavations at Tehnehin, 1903-1904 (temple of Nero's time, many Greek inscriptions showing that Tchneh corresponds to the classical Acoris). A. H. Sayce, Excavations at ed-Dêr (cemeteries of prehistoric times and 12th dyn.); Sobhi Effendi Arif, Two years in the district of Minieh-Assiut. H. W. Seton-Karr, How the tomb galleries at Thebes were cut and the lime-stone quarried at the prehistoric flint-mines of the e. desert, (and) Discovery of a neolithic settlement in the w. desert, n. of the Fayoum. Lefebure, Notes Epigraphiques; Legrain, Notes d'inspection (titles of Tutankhamon).

The statement, p. 119, that the tomb of Queen Hatshepsu (t) was found empty, requires a correction. Everything was stolen; the antiquity shops of Luxor were full of objects from that tomb in the winter of 1904.

F. W. von Bissing and A. E. P. Weigall, *Die Mastaba des Gem-ni-kai*, Vol. I. Berlin: A. Dunker, 1905. Fol. 42p., 33 Plates (19 in phototype).

A very meritorious undertaking which cannot be recommended heartily enough. The authors have sacrificed the applause of the public and chosen to work exclusively for the good of science, perhaps, even more for future generations than for the contemporaries. How to become a "famous archaeologist"? Nothing easier! Dig! Dig! Notwithstanding the destruction which has, under the name of "scientific exploration," gone on in Egypt for many decennia, the country on the Nile still has many ruins, many tracts where necropolises must be suspected, half-plundered fields of exploitation, and by making holes here and there, even a blind "archæologist" must, in the end, strike a place where some antiquities, some remnants of old buildings, etc., will allow him to send a report of "recent discoveries" to the newspapers. The papers will, of course, print greedily such reports, and the public which likes to read of "startling discoveries" (especially after meals) will be highly edified, although the great competition in "archæology" will make the fame of the discoverer only ephemeral. This fame explains the wild craze for digging which seizes even the most ignorant tourist in Egypt. Nothing necessary but money, why should he not participate in "scientific research" and its glory? It is true, science has gained considerably from the craze; new epigraphic and archæological material is streaming in every year, in consequence of that enthusiasm. But it has a dark side. First of all, the neglect of saving precious material above ground, doomed to destruction. Then the contemporaries of Angelo Mai were enthusiastic over the great discoveries due to his application of acids to palimpsest manuscripts; the present generation curses the reckless destroyer. What will be the judgment of later scholars over most of our diggers can easily be foretold.

In most cases, they act much worse than Angelo Mai; especially, the fate of buildings discovered by them is nothing but speedy destruction, in the better case, a slow destruction by the weather and the natives.

Dr. von Bissing has lived in Egypt for a long time, he knows that country and its archæological treasures, he has tasted of the pleasures and successes of the digger (the great excavations of the Berlin museum at Abusir were paid for and partly directed by him), and his means would allow him to dig regularly and extensively. It cannot be praised sufficiently that he and his amanuensis, Mr. Weigall, deny to themselves the pleasures and fame of the digger and turn to that which will ensure lasting fame to them: preserving neglected monuments for the use of future scholars by publication.

It is known that several hundreds of "mastabas" (tombs) of the ancient empire were discovered around ancient Memphis, especially by Mariette. What has been the result? The poor excerpts of the proper names and a few other inscriptions in Mariette's *Les Mastabas de l'ancien empire*. Where

the monument was sanded again, we may judge mildly of that strange treatment, but where it was left to destruction, Mariette's method was not better than that of some hunters, in the golden days of buffalo hunting, who cut merely the tongue from their huge game. The high value which the sculptures of the "mastabas" possess for archæology, anthropology, palæography, above all for the history of art, has been recognized long ago, but, as chances existed to copy more attractive monuments, above all, the chances for digging for "new finds," those sculptures remained neglected. True, the Archæological Survey of Egypt has recently given some attention to those treasures and furnished a complete publication of the large tomb of Ptahhotep, but this undertaking, with its many divided interests and its small annual publication, will be able to exhaust the material only in several centuries. The rapid decay of the monuments and their destruction by the natives selling "antikas" makes it desirable not to depend entirely on this publication, which must remain slow, because of its scanty means.

It is consequently a very good and noble thing that Dr. von Bissing has now stepped in, pursuing the same course of rescuing those neglected treasures for future students by an exhaustive publication. One of the best tombs unearthed by de Morgan 13 years ago, an elaborate mastaba built under the first king of dyn. 6, finds here a most exhaustive description and a reproduction in beautiful heliotype-plates (mostly 8x10 inches, some a trifle larger). Drawings supplement these plates repeating all details not shown sufficiently clearly in the photographs, so that the loss to science would not be very great, if the rapacious Bedawin would do with our tomb the same thing which they did some years ago with many old tombs at Dahshur, viz., driving away the guards of the bureau of antiquities with arms and hacking the tombs hastily to pieces for sale to the tourists.

I am not able to judge the merits of the architectural description; the archæological discussion of the sculptures, however, is full of interesting points. Quite novel and very useful is the idea of p. 29: enumerating and classifying the parallel representations in other tombs. It is evident that the author is right with his theory: the artists had regular books of designs which, in part, were handed down through thousands of years. After the material will be increased sufficiently, scholars will be able to determine the schools of art, their localization and development, perhaps, even the artists. A very good beginning has been made here. Of course, we need many more similar publications to build up a real history of the most remarkable bequest of ancient Egypt, its art, which finds, fortunately, more and more appreciation by modern students.

I should advise him to include at this place, in the next similar publication, also the proper names explaining the figures of persons. P. 9 (pl. X.), it looks as though the name of the first personality below had escaped his attention. I see *Ptah* . . . but cannot make out the destroyed second part.—No. 4, the parallelism with the "box of purifying material" (*hsmn*) shows that the other box cannot be that "of measuring," notwithstanding the strange orthography; "spices, perfumes" (later *hswi*) must be meant.—No. 6. *Sgrt* may mean also "stopping," transitively.—If, in 7, the determinative "net" is (as it seems) not visible on the stone, *sht* might mean "stroke, pull." The analogy of *wdt* in No. 9 for the somewhat strange *rdyt* does not quite satisfy me. However, parallels may decide this.—No. 8 "[turn here] thy face, strike" (i. e., pull).—19 *Msvd* "fattening," No. 25. The new monument seems to furnish the reading *snm* which, of course, must mean "to cram with fattening balls." *Vnng*. (The pictures represent, by the way, the rolling of these balls between the hands into an oblong form.)—27 (cp. p. 24). In *swsv*=*swt* we have the confusion of two similar letters in the hieratic. I do not know which reading is the better one; to assume a confusion of the 2 s-sounds (so as to find a causative *s-wsv* "fattening," cp. Note 29 on *wsw*) is not quite safe. In 29 and 30, *nrt* "to strike" has already a meaning akin to the Coptic development of *noudj*, "to throw down."—*Swtbw* in 41 would seem to mean "irrigated land;" a similarity to the Semitic root *swp* may be accidental (?); of course, the Coptic *shotab* "to muzzle" (p. 25; a well known word, by the

way) has nothing to do with it.—No. 40, I consider *ywt*s as a not infrequent abbreviation for *ywti* "they come."—52. "This is a (real, good?) catch." 52. *Sokhet* is not quite "marsh-land," but the open "country" in opposition to the city.—The first sign in 59=*sswp*?—77, I translate "shake well, make it settle itself!"—80, "it is a pleasant taste (*dp*??) for (everybody's) mouth"—if the lower signs really belong to the inscription.—P. 27 (ad 62) *h'wy* does not mean "double joy" but joyful are," a well known verbal form.—Ad 66, in my discussion of the sign *ss m* (*Rec. Trav.*), I had already suggested to take it as a causative of *smaw*? "go."—P. 29, Beni Hasan (not *ss*!).—The difficult question of transliteration has been treated in a rather neutral and skilful way; a for the objectionable " of the "Berlin system" may do in tests of that age, but hardly in vocalized forms. P. 9, "Athotis—onX, however, seems to me a most dangerous principle; half Grecianized half Egyptian (the Manethonian Athotis has, besides, no right here; because Manetho transliterates the king in question: Othoes. If we have to follow his poor and whimsical transliterations (as is the modern fashion), let us follow them at least exactly). Or we could write, at the side of Heracles—Hercules, also "Junocles"? The treatment of the name *Gem-ni-kai*, p. 1, is certainly a progress over the senseless *ka-gem-ne* of others, but I question, if the respectful orthographic arrangement is used with the word *ka* (or rather, as I think, *kay*) which seems to be kept at the first place, followed by a relative clause. The endearing mutilation *Mmy* (cp. p. 29) confirms von Bissing's explanation for the rest.

Some diversity of opinion must be allowed for the philological interpretation of the numerous small inscriptions accompanying the sculptures (gathered in the publication, chapter IV.). Those little texts are very difficult, being abrupt, sometimes jocular, always written in a rather obscure style, frequently intelligible only by comparison with parallel representations. I believe some of them formed part of those old books of designs and were unintelligible to later artists. However, the writer has advanced our understanding considerably by his connected treatment and the discussion in chapter V.

The complete explanation of the animals represented is a very welcome chapter, especially, because it includes the birds, fishes and reptiles; similar studies usually break off with the easiest part, the quadrupeds. The publication contains a great many interesting details: e. g., the perverse taste of the Egyptians at that age is most instructively shown, pl. 11. Hyæna meat was considered such a delicacy that the unclean animals were caught and fattened with poultry. Pl. 20 and 21 furnish a small historical detail. Our high official had, at the time, when the tomb was decorated, no legitimate wife, but the king had betrothed to him a small princess (of whom here "the great"—i. e., official—and "good"—i. e., familiar—name are given). She is represented here as a playing child but is already called "his beloved and esteemed wife." Certainly she was not yet in his house, and he may have died, before she entered it.

The second volume of the publication is promised; the comparatively low price at which both volumes will be sold (50 marks) indicates that the editor is sacrificing considerable money for the publication. He and his assistant, Mr. Weigall, deserve our thanks; if, as I understand, this is merely the opening of a series of similar publications, science may expect considerable advancement by it, especially our knowledge of ancient Egyptian art.

Philadelphia.

W. MAX MÜLLER.

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TERTAG AND SARKIS: AN ARMENIAN FOLK-TALE

TRANSLATED FROM THE ETHIOPIC

By Edgar J. Goodspeed

In Geez, the ancient language of the Ethiopians, there is preserved a mass of legendary and religious literature, for the most part translated from the ancient tongues, Greek, Arabic, Armenian, etc. While Ethiopic has existed as a written language for upwards of 2,000 years, and is still used in Abyssinia as a kind of sacred and literary tongue, it has never developed an original literature, but has been employed almost entirely in the translation of works originally composed in other languages. These translations possess for the most part a quaint and childlike simplicity, natural enough in a primitive people. One of the most characteristic and entertaining of these borrowed legends, is that of Tertag (Tiridates?) and Sarkis (Gregorius?), which has never appeared in English. It purports to be from the Armenian, and gives a curious legendary account of the origin of the Armenian alphabet and of the Armenian church. The Armenian alphabet certainly admitted some additional letters in the Middle-Ages and is at present one of the richest of alphabets, so that any hint as to its earlier period is of interest.

Like most Ethiopic pieces, Tertag begins with a sort of invocation:

In the name of the Father and the Son and the Holy Ghost, one Lord. With the Lord's help we will begin and write the story of Sarkis of Armenia and the story of Saint Tertag, king of Armenia, and the story of the king of Rome, and the occasion of the separation of the Armenians from the faith of Rome. In the peace of the Lord, our Father, Amen.

Hear, therefore, O my brothers and fathers. Now as for Tertag, his city was Tawuriz, which is a city of Armenia, and he was the king's son. And one day there came enemies against the king of Armenia, that is Tertag, and he fought with them and was conquered. But Tertag was a child and his nurse took

him and fled with him to the city of Rome, and he dwelt there and grew up. And when he was grown, he went and entered into the house of a prince and dwelt there, becoming his servant. Now he was a brave youth, and when his master saw his strength and bravery, he loved him exceedingly.

And after some days the king of the barbarians came to make war upon the king of Rome. And when the king of Rome heard it, he gathered his captains and princes, and Tertag's master also went with them, and they went out to fight. And when the two kings came out and saw each other, the king of the barbarians sent a message to the king of Rome, saying, Why should our captains' blood be shed for our sake? Come, let us, myself and you, fight together in single combat. And if you conquer me, take my soldiers and my country; and if I conquer, I will take yours.

Now when the king of Rome heard this, he feared a great fear, for he was not as strong as the other. Then he called his princes together and said to them, Who is there who will fight with the king of the barbarians? And they said to him, There is not one amongst us who is able, for he is brave and dangerous. And the prince who was Tertag's master said to the king, There is with me a brave youth, and he is able to fight with him. And the king said, Bring him to me. Then he sent for him and brought him before the king. And he said to him, Can you fight with the king of the barbarians? And he said to him, Yes, I can, but give me your horse and your sword and your royal dress. And the king said to him, If you will fight with the king of the barbarians and overthrow him, I will give you my daughter to be your wife, and I will shew you exceeding great honor, even to the half of my kingdom. Then they gave him the king's horse and sword and armor, and he went and drew near to the king of the barbarians. And he looked, and one came to fight with him; and he likewise drew near to him. And Tertag said to him with a voice of subtilty, Why have you brought your soldiers with you? Did we not say that we alone would fight with one another? And when the king of the barbarians heard this, he turned his face backward to see whether his soldiers were following him. And as the king turned his face backward, Tertag drew his sword and cut off his head. And he brought it to the king of Rome. And then the king fell upon the army of the barbarians and slew them; not one of them was left; and afterwards they returned with joy and triumph to their city.

And he said unto Tertag, Choose all that is in thy heart; I will do it for you unto the half of my kingdom; I will refuse you nothing. And Tertag answered and said to the king, Give me soldiers that I may recover the kingdom of my father. For I am the son of the King of Tawuriz, which is the city of the king of Armenia. And he said to him, Take as large an army as

your heart desires. Then he gave him 50,000 horsemen and said to him, From henceforth let us two be one; and whenever enemies rise up against you I will help you, and do you also likewise. And they agreed to this and became allies. And he took the soldiers and departed.

And when he came to the land of Armenia, he slew the king who had slain his father, and he became king over the city Tawuriz, which was the kingdom of his father. And the people of the land of Armenia obeyed him and were subject unto him, and unto his authority. And he had in his army forty brave and mighty men, and one of them named Sarkis was exceedingly mighty beyond all of them. And after many days there arose war between the king of Rome and the king of the barbarians, and with him soldiers many as the sands of the sea. And when the king of Rome heard it, he was frightened and was afraid. And he sent unto all his captains to gather troops, and he sent likewise unto his beloved Tertag, king of Armenia, saying, Know, O my son, that there has arisen against me an invasion of the king of the barbarians and many soldiers with him. Help me, O my son, and send me soldiers. Then he summoned the forty mighty men, and Sarkis with them, and made them stand before him. And he said to them, Know that, as war has arisen against my father the king of Rome, you shall help him, for it was he that set me over my country. And now swear to me by the cross and the gospel, that you will not return to me without having cut off the head of the enemy who has risen up against my father the king of Rome.

And they told the king, Forty mighty men are come from Tertag, king of Armenia. He has sent them to help you in the war. And when the king heard it, he summoned them unto him with haste and said to them, Who are you forty that have come? I relied upon his sending me 50,000 soldiers or more. And what do you want that you have come here? I have no need of you; I will not look upon your face again. Return unto Tertag your lord. They said unto the king, O our lord king, we are able to kill the enemy that has come against you; and if we fail to bring his head, slay us. But the king did not listen to them, but dismissed them, and cast them out.

And when they went forth without, they said one to another, What shall we do? If we return to our own land again, our lord the king will kill us, even as he himself said unto us. But let us trust in the Lord, and go against the enemy that has come to war with the king of Rome. And the forty mighty men went where the king of the barbarians was, and they took an oath together not to be separated in death or life, and then they met the forces of the king of the barbarians. And when the barbarians saw them, they laughed at them and said. Are these forty men coming to fight with us, or to live with us in our camp? And they went in and informed the king. But those

men began to kill the soldiers of the barbarians, and they slew many soldiers from among them. And they told the king, Behold the men of whom we told you have killed many soldiers from our host. And he sent against them 1,000 horsemen, and them they slew. And they told the king that they had slain the soldiers that he had sent, and again he sent unto them horsemen. And these also they slew, and there were none left of them at all. And when the king heard, he was amazed and vexed, and again he sent unto them 10,000 horsemen, and them also did they slay, and there were left none of them. And then the king rose up with those soldiers that were left, and fought with those forty men. But they were brave and mighty men, and there was no one that could stand against them, and their fighting was like fire in a field that burns up the grass. And they slew the king and his princes and all his soldiers. And they took up the head of the king and the head of his princes, and brought them to the king of Rome and stood in his palace. And they said unto his princes, Tell our lord the king for us, Behold we have brought the head of the king of the barbarians and the heads of his princes. And when they heard they went in and told him all the deed that was done. And he wondered exceedingly; and when they showed him the head of the king and the thirty and nine heads of his princes, he did not believe them. And they said to him, if you do not believe our word, send men to see the soldiers of the barbarians that are slain and their horses and mules and much raiment there; there is nothing that we have taken of it. And the king sent soldiers to see whether their word were true. They found the bodies of the barbarians heaped up, and they were as a mountain, and the horses also and the goods left, and there was none to guard them. And they returned and told the king all that they had seen. And when the king heard, he wondered and was amazed. And then the king took counsel with his princes and said, If these are they that have destroyed the barbarian host, how shall we prevail when we fight with their master? They will slay us and remove our city. But do you hear the counsel which is best about these men: I will bring them to my house and will make a feast for them, and then I will say, Remain three days with me, and then on the third day take ye them one by one unto your houses and slay them. And the king made them a three days' feast, and clothed them with glorious apparel, and showed them great honor. And after three days the princes took them as the king had planned and slew them, and not one of them was left except Sarkis alone. For there was there a certain maiden who knew the Armenian language and she came and stood at the door of the house and said to him, I am grieved for you and for the beauty of your youth. Behold there is left you one hour, and they will slay you; for they have slain your companions. Now he was then eating and drinking and making merry. And he said to the maiden, Are

you able to bring me my horse with all his harness? And she said to him, Yes, I am able. And she brought him his horse and placed him at the door of the house. And Sarkis put on his garments, and took his arms and went forth and mounted his horse. And they said to him, Whither are you going? And he said to them, Because food and drink are heavy within me, *I go*. but when I have ridden upon my horse, I will return. But Sarkis went forth without the city, and rode his horse this way and that, and then he turned his horse toward his country and rode with great speed and came unto his country. And when the men of Rome saw, they pursued him upon horses, and he turned and slew them, and they did not prevail against him, and he slew of them much people, and came unto his land.

And they told Tertag, king of Armenia, and said unto him, Sarkis is come from the city of Rome and he desires to be brought unto our lord the king. And the king said to them, Tell Sarkis I have sworn not to let him come unto me unless there be in his hand the head of the enemy. And he said to them, I have slain the enemy and his head is here with me. And when the king heard this, he had Sarkis come in, and he told him all the deed that was done, from its beginning unto its end. And king Tertag grieved with a great grief and wept bitterly, and said, Ah me! Woe is me! Behold my mighty men, and the pillars of my city and my arms against my enemies are slain for naught. And who is there to take vengeance upon the perfidious king of Rome? And Sarkis said, I will take vengeance for you as much as you desire. And Sarkis took all the forces of Armenia and went to the city of Rome. And he drew near and sent about it a herald, saying, Bring every man that is taken of the men of Rome unto me, that I may slay him with my own hand. This saith Tarkis from his heart. And he began to go unto the city and to slay the soldiers of the king of Rome. And when he came where the king was, the king came forth to fight with him, and they fought and he slew the king and all his soldiers, and returned with joy and rejoicing unto his land.

But this Sarkis when he desired to sleep used to see in his sleep that he was in a sea of blood, and to awake in terror, and he could not sleep. And when the king saw this, he grieved for Sarkis, and he summoned the bishops and all his priests and the monks and said to them, I desire of you that you perform a cure for me; and it is this, that my beloved Sarkis when he would sleep finds himself engulfed in a sea of blood. And they said to him, This thing is because he has shed much blood. But let him build three churches, and provide all the maintenance of the priests out of his substance, and then his sins shall be forgiven him, and he shall be healed, and we, even all the people of Armenia, will fast for him three days every year, until the coming of our Lord. And when he heard their word, he built three churches and did as they bade him, and he was healed of that

trouble, and the people of Armenia fast for him three days unto this day. And after this Sarkis devoted himself continually to fasting and prayer, and distributed his substance unto the poor and needy until there was nothing left. And the Lord accepted his prayer and his fasting and his alms, and then he rested in peace.

Let us therefore turn unto the story of the separation of Armenia from Rome. After this quarrel had taken place between them, the king and bishops and people said one to another, Henceforth let us have no dealings with Rome, either in priesthood or in scripture. Now they had indeed no Armenian scripture before this, but they were wont to read the scriptures of Rome, and priesthood also (*i. e.*, ordination?) they received from Rome. And now they said, What shall we do about priests? And again they took counsel and said, Whenever one is made patriarch of our country, the bishops shall perform his ordination. And so they did.

But a good and righteous elder named Thaddeus prayed for the land of Armenia. He fasted and prayed three weeks, and the Holy Spirit taught him twelve letters. And it was not possible for them to read the writing,¹ but he wrote all the letters upon the stone of the church, and rested without finishing the letters. And afterwards there prayed again a bishop Mardiros, and he put on sack-cloth and lay in ashes. He fasted and prayed forty and two times, and wept and lamented, and again he fasted three days, and then the Lord heard his prayer, and there came down unto him an angel of the Lord and taught him ten other letters. And he said to him, Go and add them to the letters which the elder Thaddeus wrote, and so the reading shall be finished and thou shalt have twenty and two letters, and it shall be well; thus saith the Lord unto thee. And the bishop did as the angel of the Lord commanded him, and the writing of the Armenian language was finished. And they wrote in this language the New and Old Scriptures, and they rejoiced with great joy because they were separated from Rome. And they brought twelve elders, learned in the Scriptures, and sent them to the land of Syria and of the Franks and of Egypt, to gather the interpretation of the Scripture in all tongues, and the sermons and histories of the saints and martyrs. And those messengers went about in all the land of Egypt and of the Franks and of Syria, and gathered books many beyond number, and they were exceeding rich in the word of scripture and its interpretation. Then they were of the true orthodox faith. Such was the separation of Armenia from Rome.

In the peace of the Lord we have finished the story of Armenia and Rome, and the story of King Tertag and Sarkis. Amen!

¹ Or, "with them to read the scripture."

It may seem hopeless to look for points of contact between this extravagant legend and serious history. But out of it something of at least moderate value may be culled. One is tempted to connect Tawuriz with the modern Erzroum, a place of great antiquity, and today an important city of Turkish Armenia, the residence of a pasha and the seat of an Armenian Patriarch. If Tawuriz seems too little to resemble Erzroum, we must remember that we are getting the name at second hand, and that the ancient Armenian name was probably not altogether like the modern one; so that a resemblance extending to two or three consonants is not to be despised. Upon the possibly historical character of Tertag this sentence from one of the historians is illuminating: "When the Arsacids were driven from the Persian throne by the Sassanid Artaxerxes, Chosroes the Great, of Armenia, naturally took up arms in their defence, and maintained the contest till his assassination by Arag, an Arsacid prince of Persia, when Armenia became subject to the Persian Dynasty, 232 A. D. In the massacre of the royal family which ensued, none escaped but Tiridates (Tirdat), a son of Chosroes, who fled to Rome, and afterwards with the help of the Romans established himself on the Armenian throne, 259 A. D. The first act of his reign was the persecution of the Christians; St. Gregory, who had introduced Christianity, was cast into prison, but the king being, as he supposed, marvelously cured of a dangerous distemper by the saint, the Christian religion was embraced by himself and most of his people."

That our story represents the Armenians as helping the Romans against the barbarians (by whom pagans are doubtless meant), is evidently due to the fact that Armenia lay on the Persian frontiers of the Christian world, and in the constant Perso-Roman conflicts would naturally aid Rome, to which she was bound by a common faith, against pagan Persians.

As to the founding of the Armenian church, of which this purports to be an account, the facts are less clear. The founder of Armenian Christianity was St. Gregory, originally a prince of the reigning Arsacid family, but a convert to Christianity and an ardent and long-persecuted missionary among his own people. He was made Patriarch in 302 A. D. Sarkis (Sergius) is much like Girgis (Georgius, or even Gregorius), and one wonders whether our legendary Sarkis be not a vague reminiscence of this picturesque and heroic figure. As to the grotesque representations our story makes of the beginnings of Armenian literature, it seems to be a fact that that literature was almost exclusively Christian, and originated in the fourth century. The translation of the scriptures into Armenian was completed, tradition says, in 410; and with this order of events our story will be seen to harmonize very well. One serious discrepancy, however, remains to be noted. Our narrative credits the Armenian alphabet with only twenty-two letters; as now studied it has

thirty-eight. Two of these, it is true, are said to have been added to it in the twelfth century, the earlier number being thirty-six; but the discrepancy remains serious. Either our writer did not know that Armenian had more than twenty-two letters, or he means to represent them simply as the nucleus of the alphabet ultimately developed.

* * *

THE TOTEMISTIC SYSTEM IN AUSTRALIA.

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Second Article.

The Chungari or Taponunga of these examples represents his own entire section. There are actually four varieties of men of the same section name, as we shall see presently. Moreover, I have provisionally used the terms "tabular," "alternative," "rare," and "exceptional," merely as explanatory and reference terms, and ask the reader to confine them to that use. These terms have been employed by me in various articles on the sociology of the Australian aborigines, and are again adopted for the sake of uniformity. I now think that definition by numerals would be preferable.

A Takamara man marries a Nulcherri and Napunkadi from Cycle A, and he takes Nampacha and Nakamara from Cycle B. Champacha intermarries with the same four women as Takamara, but the order of priority is varied, similarly to Taponunga's marriages. The marriages of the four men in the lower half of Table IV follow the same rules as the above and will be passed over.

In analyzing the statements made in the last few paragraphs, it becomes apparent that the four sections of men in the "Husband" column of Cycle A, if taken in the aggregate, can intermarry with the whole of the eight sections of women in the "Wife" column, if taken in the aggregate. Again, the four sections of men in Cycle B can intermarry with all the eight sections of women in the entire table, in the same way. We are therefore forced to the conclusion that there is no exogamy in the Warramonga tribe, or in any other community possessing a similar organization.

In all cases, the section name of the progeny is irrevocably determined through the mother. If Chungari marries Nungulli his children are Chapulcherri and Nulcherri; if he takes a Narulla as his wife they are Tapunkadi and Napunkadi; if he chooses a Naponunga they are Takamara and Nakamara; and if he be allotted a Namachilli maiden his children will be Champacha and Nampacha.

The foregoing is a brief sketch of the matrimonial laws appertaining to the different sections as sections. When I say

that Taponunga marries Narulla or Nungalli, etc., I mean that these sections intermarry. If we want to show the women which any specific man takes as his wife, we must go more into detail.

As already stated, all marriages are regulated by a system of betrothals, which are conducted by the old men and women in consultation. The selection of a wife or a husband for any particular person is determined by referring back to the grandparents of the pair whose union is sought. A child is betrothed to a certain individual soon after its birth. Let us assume that its mother is 16 or 18 years old at the time. This would make the mother's mother—the grandmother of the infant—about 35 or 40 years of age. The grandparents of the children forming the subject of the discussion would therefore be in their prime—at any rate as regards a woman's earlier offspring.

If we want to find the recognized wife for a boy, who is a Chungari, let us suppose, we must follow his genealogical tree through his mother, because descent is unalterably counted through the women. In order to place the matter more clearly before the reader, a couple of short tables will be employed:

TABLE V.

<i>Chungulli</i>	<i>Chupulla</i>	<i>Narulla</i>	<i>Nungulli</i>
<i>No. 2 father</i>	<i>No. 1 father</i>		
<i>Nakamara</i>	<i>Napunkadi</i>	<i>Tapunkadi Nulchorrio</i>	<i>Chapulcherri</i>
<i>Chungari No. 1</i>	<i>marries</i>	<i>Nungulli Naponunga</i>	
<i>Chungari No. 2</i>		<i>marries Narulla</i>	<i>Namachilli</i>

TABLE VI.

<i>Taponunga</i>	<i>Chungari</i>	<i>Namachilli</i>	<i>Naponunga</i>
<i>No. 4 father</i>	<i>No. 3 father</i>		
<i>Nakamara</i>	<i>Nampacha</i>	<i>Champacha Nakamara</i>	<i>Takamara</i>
<i>Chungari No. 3</i>	<i>marries Naponunga</i>	<i>Nungulli</i>	
<i>Chungari No. 4</i>	<i>marries Namachilli</i>	<i>Narulla</i>	

Although a son or a daughter can have but one actual father, the section name of such father depends entirely upon what section the boy's or girl's mother married into, hence we must trace any given individual's pedigree through his mother. For example, taking a woman of the Nakamara section, although her mother is invariably Naponunga, her father might belong to any one of four sections, depending upon whom her mother had married. According to Table IV, Nakamara is the daughter of Chupulla, whom we shall call her "tabular" or "No. 1" father. But if her mother Naponunga, had married Chungulli he would be the "No. 2" father. If she had taken Chungari as her husband, he would be the "No. 3" father. And if Naponunga had married Taponunga, then he would be the "No. 4" father of Nakamara.

These tables and the first part of this article were published in the *American Antiquarian* Vol. 28, No. 2. The article and the table should be consulted in order to understand the system of marriages. The legendary, and supernatural beings, which are brought together into the family group will form a very interesting feature of the social system of the Australians, a feature which no other author has brought out so clearly.

Ed.

On account of descent being regulated by the mother it makes no difference to Nakamara, as far as her progeny is concerned, which of the four above-named men she had married—her son is Chungari all the same. But owing to the four possible husbands obtainable by women of the Nakamara section, it is evident that there could be four sorts or degrees of Chungaris, according to whom their fathers were. We will designate these Chungaris of different lineage as Nos. 1, 2, 3 and 4. (See Tables V and VI.) It is unnecessary to add that there are, of course, four sorts of men and women belonging to every one of the sections, similar to the Chungaris of our example.

Looking at Table V, on the left-hand side, we observe Nakamara, together with her "No. 1" father, Chupulla. Following on towards the right we see Chupulla's sister Narulla, with her daughter's daughter Nungulli and her son's daughter Naponunga. The table also shows Nakamara's "No. 2" father Chungulli and his sister Nungulli, with Nungulli's daughter's daughter Narulla and her son's daughter Namachilli. Table VI exhibits Nakamara's "No. 3" father Chungari and "No. 4" father Taponunga, with their respective sisters and their grand-children as in Table V.

Going back to Table IV, it appears that two of Nakamara's possible fathers, Chupulla and Chungulli came from Cycle B, whilst the other two, Chungari and Taponunga belong to Cycle A. It will be readily understood that the Nakamara of our examples represents four sorts of women of that section. One Nakamara (Tables V and VI) is the daughter of Chupulla, another of Chungulli, a third of Chungari and a fourth who is the daughter of Taponunga.

The two fathers of Nakamara who belong to Cycle B, as stated above, are placed next each other in Table V, and their respective grand-sons, Chungari No. 1 and No. 2 are placed side by side. These latter two men intermarry with Nungulli and Narulla in Cycle A, and with Naponunga and Namachilli in Cycle B.

The other two possible fathers of Nakamara, Chungari and Taponunga, belonging to Cycle A, are placed close to each other in Table VI, and the grandson's Chungari No. 3 and No. 4 are likewise placed in juxtaposition. These two Chungaris, collectively intermarry with Naponunga and Namachilli in Cycle B, and with Nungulli and Narulla in Cycle A.

As already stated, I gained my knowledge of the Warra-monga, Wombaia and kindred tribes from capable and reliable men who reside in that part of the country. In consequence of the four different sorts of men and women composing any section, my correspondents were at first puzzled to find that one man of the Chungari section, for example, had a wife who was a Nungulli, whilst another Chungari in the same district would be married to a Namachilli or a Narulla, and so on. This led

me to ask my friends to obtain lists or genealogies of several married men and women of different sections, and after a great deal of trouble, extending over a period from 1898 to the present time, I discovered the marital regulations which I have now reported.

It is worthy of mention that in cases of bigamy, a particular man, say a Chungari, would be found to have taken his first wife from the Nungulli section and another from the Narulla section. A different Chungari might have a Narulla for his first spouse and a Nungulli for his second. Another Chungari would have a Naponunga or a Namachulli as his first and a Nungulli as his second wife.

A good deal more could be said on the highly important subject of Australian Sociology, but the space available in the pages of this journal will not admit of any further particulars at present. On a future occasion I trust I shall be granted an opportunity of supplying other matters of interest.

In the Warramonga tribes the succession of the totems does not depend upon either the father or the mother, but is regulated by locality, and I shall now endeavor to describe how this is carried out. The folklore of these people is full of fabulous tales respecting the progenitors of every totem. Some of them were like the men and women of the present day, whilst others were mythological creatures of aboriginal fairy land. In those olden days, as in our own time, the totemic ancestors consisted of families, or groups of families, who had their regular hunting grounds in some part of the tribal territory. They were born in a specific locality and occupied it by virtue of their birthright. Some of them would be, let us say, swans, others dogs, others kangaroos, others snakes, and so on. The members of these family groups were sub-divided into the same eight sections which we find in force among the people now.

When one of these legendary individuals died, his spirit was supposed to settle itself in some well known spot in his own hunting grounds, such as a rock, or tree, or hill, or soakage, or perhaps go into the ground. The individual might, during his lifetime, have left some of his attributes, as a sort of spirit offspring, at different places, such as where he camped at various times, or did a notable deed, or worked some ceremonial incantation, or the like. The sites of these several actions were scattered over different parts of the locality he occupied. All the other members of his own family group had, as a matter of course, equal rights to the same hunting grounds as he, and left their spirits at certain places in a similar manner.

In the course of many generations all the camping places, waterholes, large rocks, springs, hills, trees and remarkable objects in their own tract of country, would become saturated, so to speak, with spirits of all sorts. There would be bandicoots at one place, frogs would infest others, some would be teeming

with porcupines, whilst other spots would be haunted by snakes. Certain of these fabled areas were large and others were of small extent. Some of the traditional totems were invested with greater authority than others, like the head men of totemic groups at the present time. Some animals of a kind were numerous, as now, and left a prolific family of spirits, whilst others were few and left behind them a limited number of representatives. The exact location of every one of these notable ancestral spots has been handed down by oral tradition to all the present natives, who give a poetical and much embellished account of the doings of their ancestors, largely intermixed with superstition.

Whether in human shape or as monstrosities, these creatures of aboriginal fancy or exaggeration were possessed of supernatural powers. Some of them could form springs and water-courses, some could raise up hills and rocks at certain historical spots, whilst others could cause trees or patches of scrub to grow in remarkable forms. Moreover, these fabled spots are related to each other in the same way that human beings are related. For example, a soakage may be the mother's brother of a certain hill; a rock may be the father of a particular sandhill; a tree may be the brother of a rock-hole, and so forth.

In all aboriginal tribes there is a firm unwavering faith in the reincarnation of the shades of their ancestors. The original stock of spirits, so to speak, perpetually undergo incarnation from one human being to another. The natives are quite ignorant of the natural facts of procreation and believe that conception is altogether independent of sexual intercourse. When a woman for the first time feels the movements of the child in the womb, commonly called by us "quickenings," she takes particular notice of the spot where it occurred and reports it to the people present. It is believed that the spirit or soul of some deceased progenitor has just at that moment entered the woman's body. The entry may have been by way of some one of the natural openings, or through any part of the skin—the mode of ingress being immaterial to these ethereal beings.

When the child is born, it will have assigned to it the totemic name of the mythical ancestor belonging to the particular locality. For example, if the "quickenings" happened near a remarkable rock, or hill, or waterhole, or camping place, which was known to be haunted by the spirits of galahs, the infant would belong to the galah totem, altogether independently of the totem of either the father or the mother.

It is important to remember, in regard to the succession of these totemic names, that in all our native tribes a wife is taken away into the family group or triblet of her husband and roams about with him through his country. If he be, for example, a crow, he and his wife will spend most of their time amongst the specific haunts of his ancestor. When his wife for the first time becomes conscious of being *enciente*, she will probably be stay-

ing at a spot associated with some of the crows of earlier times, because she is living in a crow man's country. In such a case, the child when born will be denominated a crow the same as its father.

Should the woman, however, at the time of the "quickenings" be on a visit to her own people, in the district where she was born and brought up, the chances are in favor of the fact being connected with one of her own ancestors, perhaps a porcupine; then the child will get the totemic name of the porcupine the same as its mother. Again, if the woman, at the critical moment, happened to be at a part of the hunting grounds where the pigeon spirits are supposed to be predominant, her infant would be a pigeon. In this way there could be children of the same parents all possessing different totemic names, many examples of which are found now among the Warramonga and kindred tribes. But as the married pair of our example would naturally frequent their own crow tract more than anywhere else, as stated in the last paragraph, their crow progeny would probably be the most numerous, or all their children might be crows. This has given rise to the erroneous statements made by other investigators that the descent of the totems is through the father.

In some of these historic places, the spirits of several different kinds of animals, which were very closely related to each other, are said to inhabit the same tree, spring, rock, etc., and roam about in company the same as they did "in the flesh." If a mother first felt the movements of the *fetus* at that locality it would be impossible to say which of these spirits had entered her body, and in such cases it is always difficult for the old men to make up their minds which totem shall be assigned to the child.

CONCLUSION.

In conclusion it will be desirable to show the resemblance of the social structure of the four tribes dealt with in the preceding pages. In the tribes of Western Victoria there are only two principal divisions, the men of the one marrying the women of the other (Table III). The phratry name of the offspring is invariably determined through the women. The men of a phratry marry the women of the opposite one, or else the women of their own, according to their pedigree. These facts are tantamount to the statement that the aggregate of men in one phratry can marry all the women of the tribe.

Then comes the Kurnu and Kamilaroi organization with two parts in each phratry instead of one, like the Victorian tribes (Tables I and II). The men can marry into the opposite phratry or else into their own, while the phratry and section of the progeny is in all cases regulated through the mothers. In analyzing these laws, we see that the men of one phratry can marry into all the divisions of the tribe.

Next we examine the laws of the Warramonga people

(Table IV), and find that the community is divided into two cycles or phratries, just as in the Victorian tribes, except that each phratry contains four parts instead of one. The men of a phratry can marry into either the opposite one or into their own, and the descent of the offspring is irrevocably through the females, the same as in the tribes of Victoria. It appears, therefore, that the men of one phratry, collectively, can intermarry with all the women of the community, being the same law which prevails among the Victorian and Kurnu tribes.

The conclusion seems inevitable that the social structure of the Warramonga, Kurnu, Kamilaroi and the tribes of Victoria is essentially and radically the same in all its leading elements. In the three latter tribes the totems descend through the women, whilst in the former they have succession according to locality. In all of them there is an entire absence of exogamy.

Spencer and Gillen, in their "Northern Tribes of Central Australia," (1904), have given a table of the eight divisions of the Warramonga tribe, which cannot possibly represent any practical partition of the sections into cycles, phratries or anything else, being nothing more than an incongruous jumble. They erroneously state that descent of the children is through the men, and they are altogether mistaken in asserting that the community is divided into "two exogamous groups."

In his book on the "Native Tribes of Southeast Australia," Mr. A. W. Howitt shows that he is unacquainted with even the elements of Australian sociology when he states that "All Australian tribes are divided into two moieties, each of which is forbidden to marry within itself." He is also in error of speaking of "the segmentation of the community into two exogamous moieties."

I have written several articles on the sociology of the aborigines of Australia, which have been published in various scientific journals in Australia, America and Europe. I had to commence my investigations in a practically unexplored field, which possessed nothing but a fragmentary literature of the most misleading and meagre character.

From the first I saw the futility of adopting any of the opinions or following any of the methods of other Australian authors and therefore I carried out my enquiries regarding the sociology of the natives entirely on my own lines. In consequence of the difficulties referred to, my information was gathered little by little and was published as I went along. In this way much new and important knowledge was brought to light. My later works enabled me to slightly modify a few of my former conclusions—the inevitable lot of all scientific pioneers. As it is too much to expect that my work has been entirely free from mistakes, I would ask the reader to eliminate from my earlier productions anything which is not substantially in accord with the present treatise.

My researches were not confined to my native State of New South Wales, but were conducted either personally or by means of thoroughly reliable correspondents in Queensland, South Australia, Northern Territory, Victoria and Western Australia. I had the work so far advanced in 1900 that I was able to prepare a map of Australia¹ showing the boundaries of tribes with two divisions, those with four and those with eight. On that map I likewise showed the boundaries separating the tribes who practice circumcision and subincision from those who do not. Such a map had never been attempted before.

Having studied the question of Australian sociology for many years, I am forced to the conviction that neither promiscuous intercourse of the sexes, nor what has been called "group marriage," have ever existed among the social institutions of the aborigines of Australia. I am equally convinced that the divisions into cycles, phratries, sections and totems, have not been deliberately inaugurated with intent to prevent consanguineous marriages or counteract the supposed evil results of incest, but have been developed in accordance with surrounding circumstances and conditions of life. The important controversial points briefly touched upon in this paragraph will receive fuller attention in a subsequent treatise.

PARRAMATTA, NEW SOUTH WALES, November 29th, 1905.

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A NEW WORK UPON POMPEII.

Can one ever wonder at the triteness of the saying: "One man's food is another man's poison?" When one comes to consider books? Take for instance "Pompeii," by Richard Engelmann, the first of an International series of "*Famous Art Cities*" published by Chas. Scribner Sons, and Grevel & Co. of London. As a precipitate hand guide in Pompeii itself, this quarto edition would have no earthly use. The archæologist would give it about as much serious consideration as an admiral or midshipman. But the artistic and general traveler would simply devour it as a vade mecum which offers what perhaps he can find in no other work—the *Genius loci* of Pompeii. You see, it's wholly a question of the point of view which makes the value of books and incidentally explains why publishers can never meet the demand.

Engelmann's "Pompeii" is without doubt a very valuable work. After half an hour's perusal of the numerous photographic illustrations, you have an excellent mental picture of could "talk" Pompeii very creditably without having much notion of the details, where a Baedeker would leave you fogged and clogged with them as well as ignorant of the real "inward-

* Proc. Amer. Philos. Soc., vol. XXXIX, pp. 556-578, map.

ness" of things Pompeian. The new work, on the contrary is a kind of Pompeian Archæology made easy. It gives you a very lucid idea of the structural arrangement and decoration of houses, the various styles of wall decoration, the historic periods of the city as told by the architecture and building material, the appearances and purposes of the rooms, the structural arrangements of the atrium, and so on.

A word now from the archæologists point of view. Mr. Engelmann very rightly gives credit to the new regime which has abolished the old criminally slipshod methods of excavation and substituted up-to-date scientific ones. We now have preserved for us for the first time the upper parts of the walls *in situ*. Formerly it was the custom to dig down to the floor level and work in a horizontal direction at the same level, with the result that the walls fell in ruins owing to their timber supports having long since fallen into decay. Now the moment a wall is "tapped," the diggers proceed to work downwards, carefully clearing the structure of all lapilli and replacing the decayed timber supports with new ones. The inscrutable effect of this is seen in the notable case of the "House with the Balcony" in the most recently excavated quarter, which by the way is infinitely better preserved than the older excavations of the city. A crying need however, that has been consistently overlooked, is the restoration of a typical house with its dependent shops, upper floors, its paintings and furnishings, etc., to the condition of the pre-Eruption days, not omitting wax models of its varied assortment of occupants or anything that went to make up the complex of this lordly "insula." The thing has been talked about often enough; and until the public have it Pompeii as a show place will be a sore disappointment to almost all but the archæologist. But the Italian government seems to be organized supineness itself. If it takes a step with regard to Pompeii it is sure to be a retrogressive one. The removal of the entrance to the remote Stabian gate is a case in point. The want of any shelter or seat in the city is an evil crying for redress. Then again, before you can enter the place you are attacked by a guide who for his superlative ignorance will charge you a minimum of 5 francs for the shortest visit. Formerly you had the benefit of a free escort. Now this handy man has been abolished and you have the choice of two evils—the outside guide or losing yourself in the monotonous streets and seeing none of the places you had in view.

T. Boughton Wilby.

THE COPPER AGE IN AMERICA.

BY STEPHEN D. PEET.

The subject of the ages has been before the archaeologists of this country and of Europe for many years, and is not finished even at the present time, though much progress has been made. At first the division was into the stone, the bronze, and iron ages; the material which was then most in use being the index, but the question of the age was somewhat ignored.

The next stage was marked by the distinction between the historic, and the prehistoric period; the iron age being assigned to the historic, but the bronze to the prehistoric. Not long after this, the Scandinavians began to draw the distinction between the palaeolithic, and the neolithic age, the stone age being by them divided into two distinct periods or stages. This occurred after the discovery which was made by Boucher de Perthes, in the gravel beds of the Amiens. The archaeologists of Great Britain visited this region, and were convinced that the discovery was a genuine one.

This division into paleolithic, neolithic and bronze age, was not only established by this discovery, but was accepted by all archaeologists, and has prevailed for many years.

Recently there has been a tendency on the part of European and American archaeologists, to divide the paleolithic into two ages, calling them paleolithic and eolithic. This was occasioned by the discovery of many relics, which were so extremely rude that they might be classified differently from the other two.

No such division has been adopted in America. There are to be sure, many localities in which it is supposed that paleolithic relics abounded. The first of these in the order of time was the one near Little Falls in Minnesota, a locality in which Miss Frances Babbitt found some very rude quartz relics. The second was near the Delaware river where Dr. C. C. Abbott claimed he found relics deeply embedded in the gravel. The third was at Newcomers-Town in Ohio. Here Prof. G. F. Wright claimed that a paleolithic relic had been found at the bottom of a well. Other finds were in Shelter Caves, one at Fort Kennedy, Pennsylvania, another in Kentucky, another at Oaxaca, Central America, another in Arkansas. In none of these however, have the bones of extinct animals been associated closely enough with the relics to prove that there was a paleolithic horizon. It has been claimed that relics have been found in the gravel beds; the most interest-

ing one was where a skull and part of a skeleton was found embedded in the gravel beds near the Missouri river, but there were neither stone relics, nor the bones of extinct animals associated with it, and it has been doubted by the geologist whether the deposit was very ancient. One of the latest finds was that of a spring in Iowa which was visited by Mr. W. H. Holmes. He found that there were at the bottom of the spring, the bones of animals, which have long been extinct, but above them were many stone relics, some of them rude and others better wrought. His conclusion was that the stone relics were the offerings to the spirit of the spring, but the bones were those of animals which had been mired at some early period, long before the advent of man.



COPPER HELMETS AND BREAST PLATES.

This is the history in brief, of the finds which have given rise to the opinion that the paleolithic age prevailed here. This discussion began with the discovery of the skull at Table Mountain and has continued up to the present time but no positive decision has been reached. The existence of the copper age on this continent is another subject and one that deserves our attention, though no one can doubt that copper prevailed extensively throughout the entire continent. It is the purpose of the writer to present proofs of the prevalence of the copper age in America.

I. The first point will be that copper was seen by the early explorers in the hands of the natives, and was so common that it

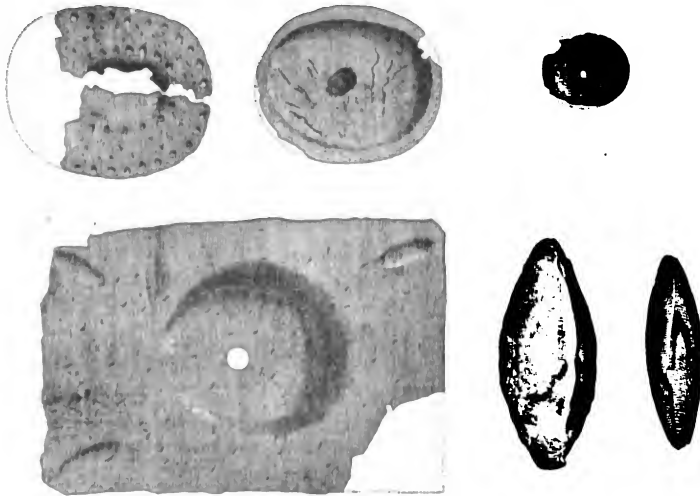
might be regarded as an index that the copper age existed in America. It will be remembered that Columbus during his first voyage around the coast of Central America, discovered near the peninsula of Honduras a band of Indians propelling a large wooden canoe, in the bottom of which were a number of copper axes. The next discovery was made by Cortez and the Spanish soldiers who conquered Mexico. Gold was very abundant, but there were also specimens of copper as well as textile fabrics of various kinds. After this, the Spanish soldiers who entered upon the conquests of Peru came upon many specimens of copper wrought into various shapes. They made little note of these as it was gold which they were seeking for.

The appearance of Montezuma as he was borne in his palanquin, by his attendants, and afterward stood before Cortez, was that of a proud monarch. The same impression was made by the Inca of Peru. His magnificence drove all thought of the barbaric age from the minds of the Spaniards. It was gold that glittered before them. The result was that expedition after expedition was sent to the new world with the expectation that gold was to be found everywhere. America was confounded with the land of Cathay, and the marvelous stories which Marco Polo told seemed to have been confirmed by the discoveries made by the Spaniards. The supposition was that America and Asia were the same country. Even Columbus believed this and expected to reach this famous land. The delusion was not dispelled until Balboa stood upon the mountain and looked out to the west and beheld the waters of the Pacific rolling in their magnificence. Balboa heard of the land of Peru, and the riches that were to be found there, but he did not reach this land. He was imprisoned by his enemies and was beheaded. Soon after this Pizarro and his troops sailed over the waters of the Pacific, reached the land of the Incas and commenced the conquest of Peru. The Inca was taken and held as a prisoner in his own palace, and in order to be released promised that he would fill the room in which he was, with gold. Stories were told of these marvelous discoveries but the most exciting thing was that gold so much abounded in the country. Bronze and copper relics were also seen in considerable abundance, both in Mexico and Peru, but no one thought they were worthy of notice. All were eager for the precious metal.

It was a new world which they had discovered and they imagined that it was a world in which a high state of civilization had always existed; a state which was equal to that of Greece and Egypt in their palmy days. The stories that were told of the magnificent cities deepened this impression, and filled all Europe with astonishment. The impression did not pass away. Even De Soto, the famous explorer, thought that he would find gold in

the new lands. With this impression he was able to gather a large company from the best families of Spain and many noblemen embarked with him, for the new Eldorado. The picture of De Soto and his troops, gathered upon the coast of Florida, is familiar to all. It was a proud array, but an array of those who were doomed to disappointment.

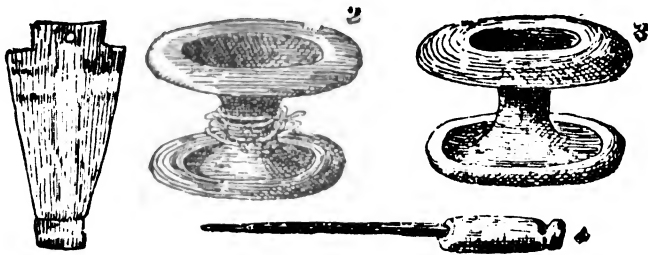
De Soto found the natives of Florida dwelling in villages, which were surrounded by extensive corn fields, using the bow and arrow for their chief weapon, but the only metal that was in their hands was the copper which they themselves had found among the mountains. They remembered the conquests of Mexico and Peru, and imagined that there were similar cities in this region. Everywhere they went, they imagined that the next day would bring to them a revelation of the hidden treasure. Copper was not what they were looking for, and they paid no attention to its presence among the people. Pearls were brought to them in great quantities, and some of the soldiers carried bags full of them, but it was not long before they were ready to throw them away in their disappointment.



COPPER BOSSES FROM FLORIDA.

They passed through village after village, toward the mountains, where they thought gold might be hidden. Buffalo robes and a peculiar kind of dog was brought to them, but the mountains yielded no precious metal. Day after day, month after month the army of De Soto made their way to the west, fighting the natives who resisted them, burning their villages. They left behind them a blackened path. At last they came upon the great river, and were astonished at its great breadth and the depth of its waters.

Stories were told to them of a people who dwelt still farther to the westward, and lived in great houses. They imagined that these cities were similar to those of Mexico and Peru, and if they could reach them they would find the gold for which they were seeking. They were however doomed again to disappointment for there was no gold to be found in all the region, and the only metal which was to be had was the copper which they despised. This metal was everywhere abundant and was often wrought into ornaments which the chieftains wore upon their persons. It was even wrought into tools which were used for mechanical purposes. It was also moulded and cut into shapes which served as religious symbols but it was not gold. No such magnificence, as Montezuma presented came before their eyes. It was a bitter disappointment to De Soto. He had known of the success of Cortez, and the famous expedition of Pizarro, but here he found no such cities as existed in Mexico or Peru. It was a long march to the west and the soldiers became weary. The equipments which they carried with them gradually disappeared. Many of the soldiers who were so proud and brave had fallen and died by the way.



EAR ORNAMENTS, GRAVER AND CROSS.

The armour in which they were clad had worn out. They were in rags and shoeless. The magnificence of the army had disappeared. They were only a band of tireless wanderers. They were impoverished, yet obedient. It did not avail that bands of natives passed before their eyes, propelling their large and graceful canoes. It did not satisfy them when they saw the chiefs dwelling on the high mounds, surrounded by the signs of authority.

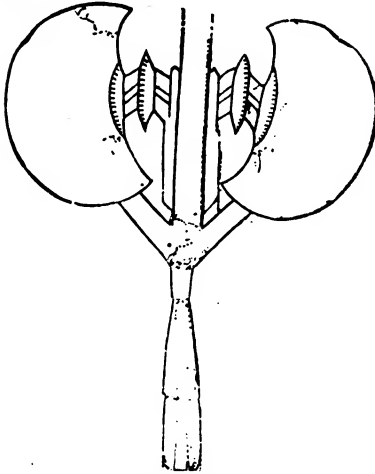
It was evident that the people were well organized and were comfortable and prosperous, but there were no such cities as had been found in the regions to the southwest. There was evidence enough that copper was abundant. Shells also were used as ornaments, textile fabrics were also common, but the halls of Montezuma seemed to them like a dream which had passed away.

The point which we make in this connection is that De Soto in his famous expedition through the Gulf States, unconsciously

found the key to the social status of all the tribes dwelling, not only there but elsewhere through the continent.

The discovery of gold in Mexico, Central America and Peru did not show the real social status of the people, who dwelt throughout the continent in prehistoric times, for they were in the stone age, but bordering on the copper age, which generally intervenes between the stone and the bronze. What we may predicate of the prehistoric inhabitants in Europe and Asia we can also predicate of the tribes of America.

II. A second fact is important, it is that the description that has been given by nearly all the early explorers proves that copper was the metal most common and widespread, and indicated the social status of the people. Bronze was common in Mexico and Peru. The early voyagers who afterward passed up the Atlantic coast, as far as the New England states, found copper in quite general use.



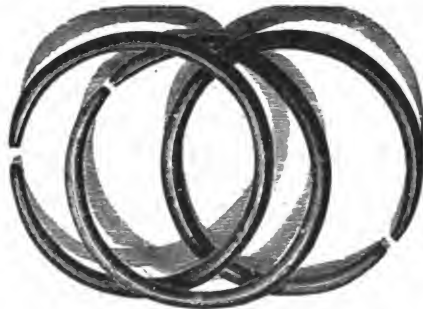
CRESCENT MACE.

The artist Wyethe, who accompanied the voyagers to the regions north of the Potomac has, given a series of pictures which represents the people as they gathered into their feasts, in their mourning ceremonies and in their war-like expeditions. From these pictures we learn about the dress of the people. Some of the pictures represent the native chiefs, clad in their military array wearing helmets in the form of an eagle, also breast plates made out of copper disks, knee bands wrought out of pearls and beads; their whole person showing their love of

ornament. Copper was also used in prehistoric times. Longfellow has written a description of the "skeleton in armour," and many have thought that it was some lone wanderer who had died in the wilderness, but it is plain that it was an Indian warrior who had been buried with his armour, made of copper bangles, wrapped around him. There are also old engravings which represent the Peruvian chiefs as wearing upon their heads helmets, and above them objects which look like masons' trowels. These crests were made of bronze or copper. They represent the shape of the Mexican ax-blade, which is the same as that found in Central America and all parts of the globe. They were generally fitted into the end of a crooked war club, and were the symbols

of military power, but they were sometimes placed upon the summit of the helmet as badges. Axes of this kind have been found in Mexico made of bronze, but the majority of them are made of copper.

Spanish writers are unanimous in calling them copper axes or *taus*, money. They became objects of barter among the Spaniards. Copper bells were also common among the natives. There are many copper relics which have been exhumed from graves and from shell mounds; these show that copper was common and was used as personal ornaments by both men and women and yet was regarded in a sense precious and sacred. There are large plates now in possession of Mr. Clarence Moore of Philadelphia, which in their ornamentation show that they were used as symbols. There are also many specimens of copper, which have been wrought into shape and represent the mythologic figures, human forms, with the beaks of birds and wings extending from their shoulders, dancing figures also with wings, other figures such as warriors contending with one another.



BRACELETS.

The official regalia was evidently made out of copper. Many of these copper plates and wrought specimens of copper are to be found in the United States Museum, among them a human figure with the wings of a bird and the horns of a deer, with various symbols scattered over the person. They show that the lines between animals, birds and human beings were obliterated and all were mingled together. The serpents' heads were often represented with crosses and circles and other symbols; bears' claws were also symbols; bones have been found in mounds with all these symbols marked upon them.

The Aztecs had axes, chisels and adzes made of copper. No instrument in Mexico is more common than the copper *taus*. These were hammered into shape so as to show the flanges on either side. Dr. Valentine has described these in an article published by the American Antiquarian Society and there is no doubt that they were used as sacred symbols. The Montezuma battle

ax was made of copper. The most remarkable feature in these copper axes is that they so much resemble the bronze axes found in Europe, in Egypt and in India and all over the globe. The Egyptian blade of Beni Hassen resembles the copper ax of the Incas. The harness makers of today have in their hands a knife resembling the copper tau. It is a significant fact that a figure resembling in form and attitude the Hindu Buddha was found in a mound in Georgia, which Dr. Wilson thinks is the result of a contact with Asia in prehistoric times. The fact that copper implements are regarded as sacred by the inhabitants of the northwest coast, shows that there must have been contact in prehistoric times.

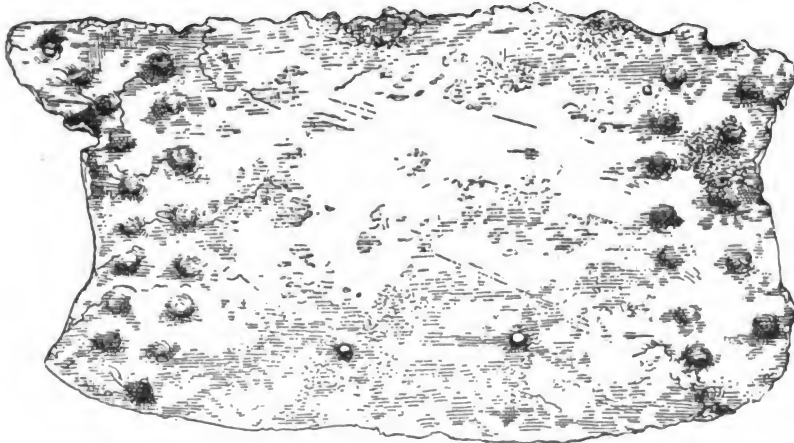
There is a striking resemblance between the knives, spears, hoes, axes and helmets found in this country and those found in the Pile dwellings of Switzerland. The same is true of the pottery of this country when compared with Eastern lands. The Suastika is common in this country. The serpent figure is also used in this country as it was in Babylonia. This suggests that there was a contact between this country and Asia in prehistoric times.

III. The use of copper relics for ornaments is worthy of notice. Little cylinders which are rolled up and may be called pendants are mingled with beads and form necklaces for children, some of them on the St. Clair river and others on the St. Francis in Arkansas, some in Madisonville, Ohio. Copper ring, found on finger bones, copper bracelets, copper beads on a piece of leather, copper breast ornaments from Mount Sterling, Kentucky, disks ornaments composed of flat pieces, copper bands, $4\frac{1}{2}$ inches long folded over wood possibly used for spears, wooden disks covered with copper, knives and axes, religious symbols everywhere. The greatest number of copper relics have been found near the copper mines in Wisconsin, where the copper was taken out and carried to various parts of the Mississippi Valley. The most interesting fact about the copper relics is that so many were used to represent the mythology which prevailed.

If we study the Pile dwellings of Switzerland, the wall forts of Italy, the ancient villages of Thessaly and Asia-Minor and the pyramids of Babylonia, we shall find their counterparts in America, but here they belong to the copper age while in Europe and in Asia they belong to either the bronze age or the beginning of the iron age. There was no phonetic alphabet in America, though picture language had reached a high stage, and the beginning of writing and of making of books may be recognized.

What is remarkable is, that we find the relics bearing striking resemblances to those found in the far east. The knives, the

axes, the hoes, the spears, the arrows, even the shields and the helmets were quite similar. The pottery had many features which were similar. Their shapes were very much the same, even the patterns, and the figures, which are painted upon them. We also find the serpent figure common in this country as well as in Babylonia and the far east. The Suastika has been recognized and some think the figure of Buddha has been recognized.



COPPER BREASTPLATE FROM THE MOUNDS.

In Florida we shall find copper bosses (fig. 2) which have been described by Mr. Clarence Moore, also among the stone graves we shall find ear ornaments similar to those found in Ohio, (fig. 3.) In this region we shall find the crescent maces, which were borne by the warriors in battle (fig. 4;) copper rings, similar to those taken from the altar mounds in Ohio (fig. 5;) copper breast ornaments, such as have been found among the mounds of Ohio (fig. 6;) copper sheaths similar to those shown in the cuts (fig. 7;) copper gorgets and bracelets, (fig. 8;) many specimens of which have been exhumed in the mounds of Ohio. The most remarkable relics will be those which represent the mythologic figures, cut out of their copper plates representing human figures. Also in the same locality we find the head of a serpent and many other strange figures, which remind us of the far east. (9-10.) Here also we will find copper sheaths, which were probably placed around pieces of wood and used as breastplate or ornaments.

We may pass over the Rocky Mountains and enter any of the rivers which enter the Pacific. We will pass through several savage tribes who do not seem to have used copper, but as we reach

the northwest coast we will find the women still wearing bracelets, similar to those worn by the women formerly dwelling on the Tennessee and the Cumberland river and other branches that lead into the Ohio. Here the men may be seen having in their hands huge pieces of copper which have been wrought into shape and are still regarded as sacred. Copper is a matter of barter as much as blankets.

There were in America no such domestic animals as were common in the Lake dwelling in Europe through a peculiar breed of dogs existed in the gulf states; a breed which has been represented by the pottery relics found in Florida. These are in contrast to the dogs which were common among the Indians of Wisconsin, which resembled the prairie wolves more than they did ordinary dogs. There were elks and moose, antelopes and buffalo, which might have been domesticated had the aborigines been patient enough, but the only locality where domestic animals were found at the time of the discovery was in Peru. There the llama was in use for carrying burdens over the mountains.

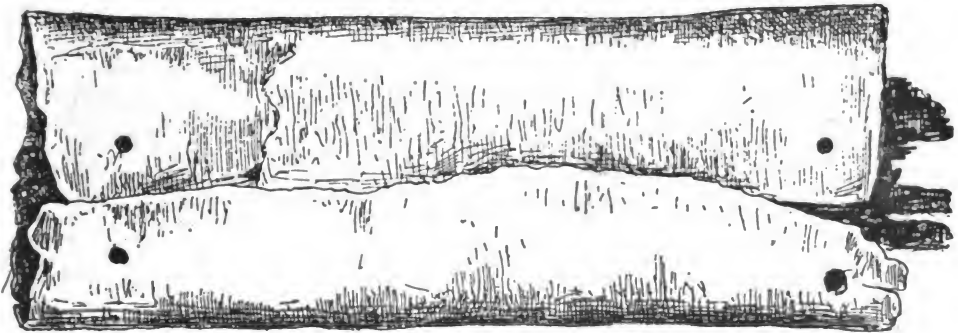
Copper relics, were everywhere present. We may go from the mouth of the St. Lawrence, up through the chain of the great lakes and then across to the head waters of the great river and find copper relics everywhere present. The character of these relics is as important as their distribution. They were not confined to mere weapons of war, nor to agricultural tools, nor even to ornaments and military ensigns, but often had a mythologic significance. Some of them seem to suggest a system of religion, somewhat similar to that which prevailed in Europe at the opening of history. Among these may be mentioned the eagle men, or winged figures, and the so-called fighting figures. They seem to tell the story of the contest between the supernatural beings. The tendency was to mingle animals and birds and human creatures together and ascribe the same attributes to each in their art as well as in their mythology. The copper stencils which have been found in the altar mounds near Hopeton, Ohio, illustrate this point. There were bone carvings found in the same locality which showed a delicacy of touch at the same time the force of mythology.

Wisconsin seemed to be the source of the copper, but here there were more knives and spears and fish-hooks and other articles for common use. The mythology of this region being embodied in the emblematic mounds rather than in the relics.

IV. What is very important in this connection is that copper was everywhere associated with other relics, which are indicative that this people had passed out from the lower stage of savagery,

and had come into a social condition similar to that which existed in Europe before the opening of history. The evidence of this is found in the fact that there were pile villages on the sea coast, and permanent villages everywhere. The rock inscriptions, and the inscribed stones are evidence that they were approaching that stage, in which the art of writing begins. The totem system prevailed extensively. A social organization was peculiar, mythology abounded and was very suggestive. This mythology was embodied in the emblematic mounds of Wisconsin and was shown in the copper relics of the stone graves, and was also embodied in the carved columns of the Northwest coast but was especially manifest in the copper relics which are found in all parts of the continent.

Let us take the winged images which are found near the Etowah mound in Georgia. Some have mistaken these for angels. It will be remembered that there was a time when the impression prevailed that America was settled by the lost tribes of Israel. The winged figures, however, are purely American and represent the mythologic creatures which were supposed to be half human and half animal. These creatures have beaks and claws and expanded wings, and hold daggers in their hands, and seem to



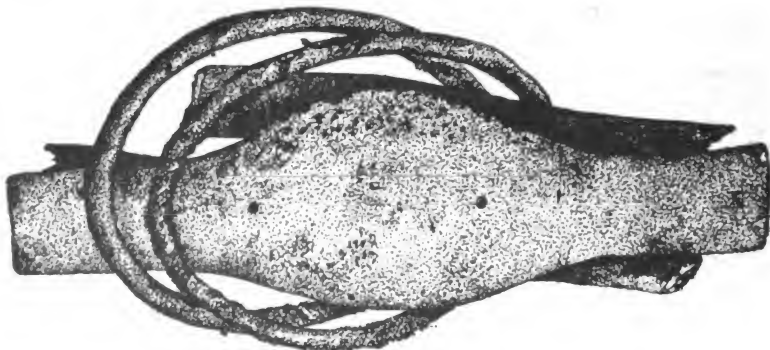
COPPER SHEATH.

be fighting. They remind us of the winged lions of Babylonia, and the priests with wings on their shoulders. They illustrate the growth and progress of religious symbolism on both continents. They also suggest that the copper age came in before the bronze age, even in the far east. The same is true of the copper spoons which are found among the stone graves and the mounds of Ohio. The copper tablets and engraved bones, which have been found in the mounds in Ohio, are especially interesting, as they suggest that there was a mingling of human and animal figures, here, similar to that found in Oriental lands. The serpent symbol is also very common and reminds us of the serpent worship in the far east. These figures represent

the mythology of the copper age, though there is a strong resemblance between some of the figures found in the stone graves, and those found in Central America. When we come to the ordinary weapons such as the spear heads, knives, and lances, we find a remarkable resemblance to those which were made of steel, in civilized countries, and yet they bear the marks of an aboriginal culture. These were the weapons of the aborigines of the Mississippi Valley.

There are various personal ornaments, such as copper rings, and breast plates, and armlets. The gorgets, pendants, and perforated stones were associated with the copper ornaments, the incised figures upon bone are all significant of a high stage of art.

The point which we wish to illustrate is that the stage of culture in America at the time of its discovery is similar to that which existed in Europe, Asia and Africa at the opening of history, but was superior to that which existed in the stone age, and copper is the real index to the social condition at that time.



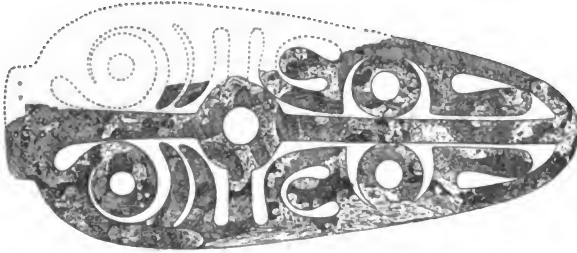
COPPER BRACELETS FROM THE MOUNDS.

What that state of society was, has been shown by Mr. L. H. Morgan who has made a special study of ancient society.

He says that there were three stages of progress. The first was savagery, the second barbarism and the third civilization. Each of these were divided into three grades: lower, middle, and upper grades. The majority of the aborigines in America were in the upper stage of savagery, some of them were in the lower stage of barbarism. Barbarism was signalized in the old world by four events, the discovery of the cereals, the domestication of animals, the use of stone in architecture, skill in melting iron ore. In Europe at the opening of history, the people had discovered the metals, had alloyed copper with tin and so made bronze. They invented the furnace and had begun to use iron

too's, such as the ax, sword and plough, and had domestic animals. According to this definition the majority of the natives of North America were savages, but the most advanced of them were barbarians. There was no civilization on the continent, still if we compare the people of Central America with those of India and China, and call the latter barbarians we will have a pretty good picture of the stage of culture reached on the continent, even after the iron was introduced, but preceding that age were the bronze and copper ages. We here quote the language of Helwald, who has drawn a picture of the state of society in Europe at the opening of history:

"It is a fact assured to science that a race of hunters, of agriculturists and of artisans lived in Helvetia eight or ten centuries before the time of the war of Troy, and that the same condition prevailed in Germany on the coast of the Baltic quite late in history.



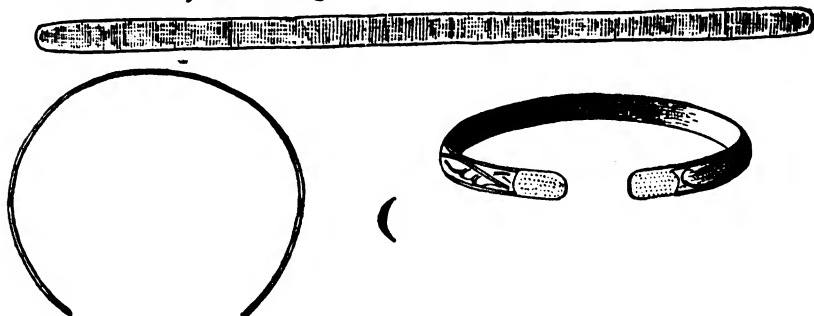
SERPENT HEAD IN STENCIL.

It would be absurd to suppose that those primitive tribes had proceeded to the fabrication of bronze without having previously availed themselves of copper and tin.

In Hindustan, in Central Asia and in America the age of bronze succeeded that of copper, and that of copper in turn succeeded the age of stone. The villages of the age of bronze much surpass those of the preceding period. Once in possession of metal, industry attained a great superiority. The ax continued to be the faithful comrade of the warrior. Among the industrial remains we find knives, stone for grinding and sharpening, needles, pins, weaver shuttles, fish hooks, quirts, toys, ornaments, and pieces of amber. About the people who dwelt in the lake villages we know little. The relics speak a language no less eloquent than that left by the Roman conquerors. It is evident that the people who occupied the lake dwellings of Europe were passing from the stone age to the bronze age, but owing to their proximity to the civilized nations on the coast of the Mediterranean they were prevented from developing what might have been called the copper age. Still the stage of culture which they

reached was in many respects similar to that which prevailed in America at the time of its discovery. The period of the lake dwellings began in Europe, long before the date of history, but it continued long after, so that we may become familiar with its peculiarities. It may be well then to study the condition which prevailed in America during the copper age.

If we look over the entire continent as it was represented to us by the earliest explorers we will find that the stage of culture fell behind the civilization which prevailed in India, in China, in Babylonia, Egypt, and Greece, but it was equal to that which prevailed in Europe during the latter part of the stone age, and the beginning of the bronze age. There were no iron tools in use, there were very few domestic animals. The people had not yet invented the alphabet, they had no use for iron, though it was abundant, but they did use copper, and in a few cases may have mingled it with tin and made bronze.



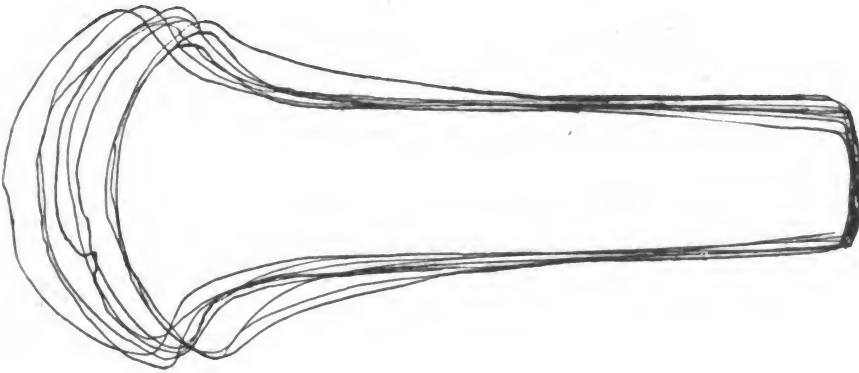
COPPER BRACELETS FROM THE NORTHWEST COAST.

As to the date when the copper age was introduced into America we have no knowledge, but it is probable it was as early as the time of the lake dwelling in Europe, but after the time of the cave dwellers. The point which we make is that the copper relics which have been gathered so carefully by so many collectors, give a better idea of what the stage of culture was than any other objects. Next to them are the beautiful carved pipes which are so numerous, and next to these are the textile fabrics and the basketry. We may compare the picture presented by these objects with that which is presented by some of the authors in Europe who have made a study of the archaeology there.

V The various collections of copper are to be considered next. We have spoken of the copper that was seen by De Soto in the hands of the natives in the Gulf states. Mr. Clarence Moore has been exploring the mounds and shell heaps of Florida and has described the relics which he has discovered. Among these

are many beautiful specimens of pottery, but the most interesting are the specimens of copper. Some of these are in the shape of copper disks, copper beads, copper bosses, which are represented in the cut. These were probably used as a dress ornament.

Copper relics were found among the stone graves of Tennessee. These have been described by Gen. Gates P. Thurston in his valuable book on Tennessee. The most interesting of these relics were the shell gorgets, but a copper ornament in the shape of a cross was discovered by him in an aboriginal cemetery, also many spool ornaments plated with copper. The next collection which comes up for notice is that which has been gathered by Prof. Putnam. In this collection are many copper spears from New Jersey, copper implements and tools from Mexico, copper axes from San Luis Potosi, also nine copper axes from Oaxaca, a copper hoe or knife resembling the chopping knife common with the modern housekeeper. It is from Oaxaca. These were called the Mexican tau. Mr. Alexander Agassiz found copper relics in Peru, among them a trowel from Ancon, Peru, and a club with a star shaped head made of copper.



COPPER KNIVES FROM MEXICO.

The collections of copper in Wisconsin are especially worthy of notice. Mr. Hamilton of Two Rivers has probably the largest collection found in the state. These are made into arrow heads, spear heads, fish hooks, axes and knives. Mr. W. H. Holmes found copper among the cliff dwellers of Arizona and New Mexico. Quite a collection of copper relics may be found in the cabinet of the University of Vermont at Burlington, also in the cabinet of the Museum of Natural History in New York, another in the museum at Albany which has been described by Rev. Mr. Beauchamp. Quite a collection of copper relics may be found in the Historical Society of Cleveland, O. These were gathered in part by Col. Whittlesey, who was the former secretary. There

is a small collection of copper relics in the museum of the Historical Society at Columbus, Ohio; a large collection, also, in the Field Columbian Museum of Chicago. Many of these were gathered by Mr. J. O. Dorsey in Peru and were on exhibition at the World's Fair in 1893. A very interesting collection is in the Davenport Academy. The pipes here are very numerous and interesting, but the collection of copper is also very valuable. The copper relics are perhaps more numerous in Wisconsin than any other state. Large numbers of them may be found in the cabinets of Beloit College and at Madison. Another collection may be found in the Museum of Natural History in Milwaukee.

There are a number of collections in St. Louis, many of them gathered on the great American bottoms opposite that city. There are also many collections on the Pacific coast, some of them in British Columbia, others at Seattle and Tacoma in Washington, also in Oregon, and in California. Of course the largest collection is found in the National Museum in Washington, D. C. There are also large collections in the National Museum in the City of Mexico. These collections represent the different districts in which copper abounded. They represent the different character of the copper relics in America; they show that the copper age prevailed throughout the entire continent and was one which continued up to the time of the discovery.

The symbolism seen in the copper relics which come to us from the stone graves, in the carved columns of the northwest coast, in the pottery and other figures found among the cliff dwellers, and in the various relics found in Central America and Peru, all carry our thoughts back to the strange figures which prevailed in Egypt, Babylonia and India, though there is no such state of civilization here as existed there. Yet they all show the progress of thought and the system of mythology which has prevailed in those lands in which the book of revelation has made itself felt. They show the various symbols which have attended idolatry everywhere.

ORIENTAL DEPARTMENT

EDITED BY DR. C. H. S. DAVIS.

The announcement is made by Dr. Bosanquet, director of the British School of Archæology at Athens, that he has discovered on the bank of the River Eurotas, near the site of the ancient city of Sparta, the famous temple of Artemis with many statues, gold, silver and ivory ornaments and other relics. Dr. Bosanquet first communicated his discovery to King Edward, who to-day telegraphed his congratulations.

The temple of Artemis (Diana of the Ephesians) was founded 600 years before the Christian Era, in Ephesus, and was rebuilt 200 years later. The temple was ionic, dipteral, octastyle, with twenty-one columns on the flanks, and measured 164 by 342½ feet. The base diameter of the columns was six feet, their height fifty-five feet. The bases of thirty-six columns of the front and rear were beautifully sculptured with figures in relief. The cella had interior ranges of columns, Ionic in the lower tier, Corinthian above.

The exploration of Central Asia has been undertaken by the French Geographical Society. The object is to excavate the ruins of the country beyond Tibet, with a view to laying bare the traces and evidences which can throw light upon the ancient civilization which once flourished there. This mission has been intrusted to a comparatively young man. His name is M. Peliot, and he is professor of Chinese at Hanoi. During the Boxer outbreak of 1900 M. Peliot was in Peking, and went through the siege of the legations, distinguishing himself by several acts of valor.

During the year 1904-05 the work of the Egypt Exploration Fund was carried on in two places, at Deir el-Bahari and on the peninsula of Sinai. At the former place M. Naville continued his laborious task of excavating the temple of Mentuhotep III., laying bare the ramp, the southern colonnade, and the great central platform. This last structure was apparently not the base of an actual pyramid, and soundings have failed to reveal any tomb within its area. Around it, however, several tombs of priestesses and princesses were disclosed, one of the latter adorned with quite remarkable sculptured reliefs, representing the life of Princess Kauit in the lower world. The work at Deir el-Bahari is not yet completed. The expedition on the Sinaitic

peninsula was in charge of Mr. Petrie, whose first visit was to the ancient turquoise mines of Maghara, whence he reports that the modern mining company which worked the old site in 1901, has utterly destroyed twenty-four of the ancient inscriptions before noted at that place, and has injured six others, leaving only eleven intact. These have now been removed to the Cairo museum. A recognition of distinctly Ethiopian characteristics in a portrait of Sanekht, the first king of the third dynasty, leads Mr. Petrie to surmise that the second dynasty may have been overthrown by an Ethiopian invasion. At Serabit el-Khâdem Mr. Petrie completely cleared the temple and its surroundings, finding many new inscriptions, and copying others completely for the first time. One piece of sculpture was discovered which is ranked by the explorer as not only of great historic interest, but among the best specimens of Egyptian art. This is a head of Queen Thyi, with her name on the front of her crown. It is well figured in the Fund's "Archæological Report," just issued. The existence of lavers evidently for ceremonial purification, of altars for incense, and of an immense mass of ashes before the sacred cave, apparently the débris from burned offerings, points to Semitic ritual in this place. A similar indication of Semitic influence is found in the sacred stones, or bethels, "on every high hill." Mr. Petrie will continue his investigation of Semitic relations in early Egyptian history by work the present year in the eastern side of the Delta, under the Egyptian Research Account. The results of the year's work at Deir el-Bahari will be published in the fifth memoir of the Fund on that subject, while Mr. Petrie's investigations will appear in an atlas of plans and inscriptions, with translations, published by the Fund, and in a more popular book of narrative and description, accompanied by 160 photographs, which Mr. Murray is to issue.

The University of Liverpool's excavations in Egypt last season met with very satisfactory success. Mr. Garstang was compelled to abandon for the present his digging at Hierakonpolis on account of the extreme dryness, but not until he had established that what he calls the Great Fact there was built upon the site of a predynastic cemetery hitherto unworked. Nearly two hundred archaic graves were here uncovered and photographed. At Hissayeh, south of Edfu, he discovered some historic pottery and wooden objects of a type claimed to be different from anything yet found elsewhere, as also some hieroglyphic papyri of late Pharaonic times. The season's work came to an end with Esneh, where the whole site was conceded to the expedition through the courtesy of Professor Sayce, and some memorials of the Hyksos period were found, together with two tombs of unusual design of the time of Rameses VI. All the objects

brought back to England will be exhibited in the Institute of Archæology at Liverpool, The University of Liverpool has sent an expedition under Mr. Garstang to make explorations and excavations in the vicinity of Esneh.

At the last meeting of the Archæological Institute of America, Dr. Caroline L. Ransom, of Bryn Mawr College, read a paper on "Chronological Survey of the Forms of Egyptian Stools, Chairs and Couches." The paper was accompanied by twenty-two lantern slides, showing typical designs. Dr. Ransom classified Egyptian furniture according to the forms of supports. While legs of rectangular section or of the appearance of turned work are not unknown, the supports carved to represent bulls' or lions' legs are most common. Couches and stools with bulls' legs are the earliest forms, but even in the Old Kingdom the stool with lions' legs is introduced. In the New Empire the lions' legs completely supersede the older form of support for all chairs and couches. The front supports of the seat or couch imitate the forelegs of the bull or lion, and the back legs of the piece of furniture are carved in the form of the animal's hind legs. Perhaps many of the extant small bulls' legs of wood and ivory, which are commonly ascribed to small boxes and caskets, may be derived from models of chairs and couches. In the New Empire, high-backed chairs are much more prevalent than earlier. There is a general tendency toward increased comfort seen also in the curve of the back of the chairs and the hollowing out of the seat. Vertical and diagonal braces form a kind of truss-work between the rounds and rails of many New Empire chairs and stools. New Empire couches with lions' legs, such as the couch found by Mr. Davis in the Valley of the Tombs of the Kings, and illustrated in the Century Magazine for November last, were shown to have footboards, but no headboards. This is clear on the evidence of terra-cotta models of figures reclining on couches of the type in question, for the feet of the reclining persons are toward the one rail of the couch, and the person's head is supported on a head-rest at the other end of the couch, where there is no rail.

The American School at Athens purposes to publish in the near future an authoritative and adequate account of the celebrated temple known as the Erechtheum, an account that shall be of value alike to the historian, the archæologist, the artist, and the architect. The arrangements for this work were made by the late Director, Dr. Heermance, who was to contribute a discussion of the inscriptions. His manuscript, which was left in a state almost ready for publication, will be completed by Mr. Lacey D. Laskey, at present Secretary of the School. The marble

sculptures have been entrusted to Professor Harold N. Fowler. The architectural remains have been studied by Mr. Gorham Phillips Stevens, for two years fellow in Architecture of the School—the second year on the Carnegie foundation—and at present of the office of McKim, Mead & White. Some of Mr. Stevens' drawings and reconstructions have been used, though necessarily greatly reduced in scale in the article "The East Wall of the Erechtheum" in the Jan.-March *American Journal of Archaeology*. Mr. Stevens' demonstration in this article that the east wall of the Erechtheum was pierced by two windows cannot fail to command attention.

Dr. Edgar James Banks contributes to the April *Open Court*, an article on "The Statue of King David, and what It Teaches." This statue of David has the distinction of being the oldest statue in the world. It is the only perfect Babylonian statue and the only one in the round with the arms free from the body. Its execution testifies to the advance of civilization during the fifth millennium, B. C.; the art of that age in Babylonia seems to have equalled the art of any other. In the same number Professor Edgar L. Larkin, Director of the Lower Observatory on Echo Mountain in the Sierra Madre Range, contributes an article entitled "The Waning Light of Egypt," showing how the progression of the sun's position in the ecliptic causes a change in the direction of the solar light which in ancient days figured prominently in man's religious ritual.

In answer to numerous enquiries, we would say that American subscriptions to the Egypt Exploration fund have fallen off so largely that the entire American committee has resigned. The finances of the fund are, chiefly for this reason, not in a flourishing condition. Sir John Evans has retired from the presidency.

When did the Exodus occur? According to Egyptologists, Ramses II must be regarded as the Pharaoh under whom Moses first saw the light, so the chronological relations—having regard to the great age of the two contemporaries, Ramses II and Moses—demand that Menephtah II should be acknowledged as the Pharaoh of the Exodus. Now comes Mr. George W. Shaw in an article entitled "The Period of the Exodus," in the April *Monist*, who endeavors to prove that the Exodus occurred during the latter portion of the reign of Setnekht, that is to say, a short time before that of Ramses III began. Says Mr. Shaw: "Bunsen has shown that the Hebrew chronology throws only a feeble light on the question. The irreconcilable statement of the

received text, the Septuagint, are Josephus, and the doubt which of the judges are synchronous throw the matter into confusion. One gleam of light is visible. These were between Aaron, who was the high priest at the time of the Exodus, and Zadac, who anointed Solomon B. C. 1010, eleven high priests succeeding each other by the law of primogeniture. Taking twenty-two years, the average length of the reigns of hereditary monarchs as a criterion, their administrations would fill a period of two hundred and forty-two years, or only ten years more than the interval between B. C. 1010 and 1272. This estimate, however, unreliable as to the exact numbers, is sufficiently near the tenth to discredit the period of four hundred years of the received text (440 of the Septuagint) given as intervening between the Exodus and the building of the temple, and to indicate approximately the correctness of the data above given."

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It is very unfortunate, that owing to the wholly unnecessary trouble in the American branch of the Egypt Exploration fund, the subscriptions have so fallen off that it will be impossible for Messrs. Grenfell and Hunt to continue their work at Oxyrhynchus after this year. Their work this past year for the Greco-Roman branch was more richly productive of papyri than of the year previous, though the pieces were for the most part, of the first four centuries of the present era, and included fewer theological and classical fragments than were found in the earlier excavations. Among the Hibeh papyri, which will be published in June, are a number of marked interest, such as facts of perhaps "Tyro" of Sophocles, the "Oineus" of Euripides, a gnomic poem of Epicharmus, the play of Philemon on which Plautus based his "Aulularia," with sixty-eight consecutive verses probably from Menander, reveal portions of Lysias against Theozotides, previously known by title only, fragments of Euripides' "Alcestis," "Iphigenia in Tauris" and "Electra," fifteen or sixteen centuries earlier than the mediæval MSS., and three hundred lines from the treatise on rhetoric now generally assigned to Anaximenes. Other Homeric fragments are said to add new weight to the contention of the editors concerning the Alexandrian origin of the Homeric vulgate.

When we consider that for many generations there existed mutual relations between the Egyptian and the Semitic races, it is not surprising that we should find many traces of Egyptian influence in the Old and New Testaments. We find many instances of the influence of Semitic manners on the Egyptian spirit and customs, and also the use of Semitic words which the Egyptians employed in place of good Egyptian expressions, like Rosh, "head," Sar, "king," Beit, "a house," Ketem, "gold," Barak, "to bless," Bab, "a dove," Birkata, "a lake," and many others. It is only within the last few decades that students have been sufficiently well provided with mythological texts and com-

mentaries of the necessary material to fully consider the relationship of Egyptian mythology to Jewish religion. Although Lieblein, Volker, Groff and Cheyne have touches upon the matter, yet the subject has as yet not been fully treated in the light of our present knowledge.

Professor Flinders Petrie is busy this year on the eastern side of the Delta, working for the Egyptian Research Account. The Archæological report of the Egypt Exploration Fund is just issued, and contains an account of the work of Professor Petrie on the peninsula of Sinai. His first visit was to the ancient turquoise mines of Maghara, whence he reports that the modern mining company which worked the old site in 1901, has utterly destroyed twenty-five of the ancient inscriptions before noted in that place, and has injured six others, leaving only eleven intact. These have now been removed to the Cairo museum. A recognition of distinctly Ethiopian characteristics in a portrait of Sane-kht, the first king of the third dynasty, leads Mr. Petrie to surmise that the second dynasty may have been overthrown by an Ethiopian invasion. At Serabit el-Khadem Mr. Petrie completely cleared the temple and its surroundings, finding many new inscriptions, and copying others completely for the first time. One piece of sculpture was discovered which is ranked by the explorer as not only of great historic interest, but among the best specimens of Egyptian art. This is a head of Queen Thyi, with her name on the front of her crown. This is illustrated in the present report.

Professor David G. Lyon, of Harvard, will be the Director of the American School at Jerusalem during the year 1906-1907. Dr. Reissner has been appointed Field Director of the Expedition to be sent to Palestine under the auspices of the Semitic Museum of Harvard University.

A Memorial Volume to the late President William Rainey Harper, consisting of articles by the most prominent Semitic scholars of America, has been arranged under the editorship of Robert Francis Harper, Francis Brown and George F. Moore.

Professor James H. Breasted reports a successful year of work for the Oriental Exploration Fund of the University of Chicago, Egyptian Section. Dr. Breasted returns to the University for the Summer Quarter and will leave again for the Soudan in September.

Professor Max Margolis, of the Hebrew Union College, Cincinnati, and Professor Olaf A. Toffteen of the Western

Theological Seminary, Chicago, will be attached to the Semitic Faculty of the University of Chicago for the Summer Quarter, 1906.

In the forthcoming (July) number of A. J. S. L. Dr. Muss-Arnolt has a long article on Recent Contributions to Assyriology in which he reviews the work of Fossey, Virolleaud and Prince.
M. HAKKONER.

THE EXCAVATOR'S SPADE AND THE BIBLE.

BY THE REV. A. F. SHAUFFLER, D. D.

No book has been so often attacked as the Bible. And in the Bible, it is the Old Testament particularly that has been assailed. To follow and repel all these assaults would not be possible in a brief article like this. But it may be helpful to look at some of the charges that have been made by sceptics against the Biblical narrative, and see how excavations in Bible lands have shown that the Bible is right and the sceptics wrong.

For example, it has been said that the whole story of the fight of the kings with each other, as told in the 14th chapter of Genesis, could not be true, for "there was no such communication between the far East and Palestine" as that chapter sets forth. At the time that this affirmation was made, we had no means of controverting it. But now we have discovered that long before Abraham's day, Sargon of Accad, from the far East, marched three times to Palestine, and actually left there an inscription stating this fact. So, as in so many other cases, the Biblical record proves to be true, and its critics to be mistaken.

Again, the story of Israel's oppression in Egypt has been denied as unhistorical. There was no such oppression, said some sceptics. Now this criticism, too, has been shown to be false. If you turn to Exodus i. 11, you read: "Therefore did they set over them (the Israelites), taskmasters, to afflict them with their burdens; and they built for Pharaoh treasure cities, Pithom and Ramses." As this did not accomplish what the Egyptians desired, we read in Exodus, v. 7, 8: "Ye shall no more give the people straw to make brick, and the tale of bricks which they did make heretofore ye shall lay upon them." And later on we read that the taskmasters said to the people: "Go therefore now and work, for there shall no straw be given unto you, yet shall ye deliver the tale of bricks." So far the record of the Word.

Now in these later years, thirty-two centuries after these events, what do we find on making excavations in Egypt? At Pithom they have excavated these very "treasure cities," and have found the lower layer of bricks to be well made with

straw. Then come layers of bricks that have poorer straw, which points to the time when the poor Israelites had to collect their own straw as best they could. Then come other layers of bricks that have no straw at all, which we may well suppose to have been made when even what straw the slaves could gather gave out. We read of sermons in stones. But here we have sermons in bricks, and they preach to us this truth, that the Word of God is true, and that the history that it records is reliable. Never again will it be said that the story of the oppression of Israel in Egypt is a figment of the writer's imagination.

It used to be said that the Patriarchs were ignorant men, and that in all probability they could not even read. It was also at one time claimed that Moses could not have written what the Bible says he did write, because he did not know how. Now no one would any longer make such a statement. We know that long before Abraham ever left Ur of the Chaldees, they knew well how to read and write, and we have very many clay tablets from before his time in our own hands. Indeed, the writer himself owns a tablet from Chaldea, which, when Abram left Ur, was already one thousand years old, and is therefore today 5,000 years old. These results of the excavator's spade have again put to shame the assertions of many sceptical critics.—*Good Tidings.*

As a result of a recent trip through Palestine and Syria in search of traces of pre-historic man, Dr. Max Blanckenhorn has come to the conclusion that the invasion of the Israelites in the middle of the XIIIth century brought iron, which had hitherto been unknown, into Palestine. It was possible, he thought, that bronze had been introduced there perhaps 800 years previously, but before the only stone implements were known.

The Annual Report of the U. S. National Museum has just been issued by the Smithsonian Institution. Six hundred and eighty-six pages are occupied with "Contributions to the History of American Geology," by Geo. P. Merrill. Mr. Immanuel M. Casanowicz describes the S. S. Howland collection of Buddhist Religious Art in the National Museum. The collection was made by Mr. Howland during his travels abroad, which extended from Iceland to Burma. Most of the objects were obtained by him from their original possessors. Besides the objects described, Mr. Howland's deposit includes also several valuable Oriental manuscripts. There are seventeen full page illustrations. Mr. Heywood Walter Seton-Karr contributes an article on "Flint Implements of the Fayum, Egypt." The article is illustrated with twelve plates, containing cuts of 259 knives, arrowheads, saws, scrapers, knives, spearheads, etc.

Book Notes

Professor W. H. Holmes, chief of the Bureau of Ethnology, will urge the Appropriation Committee of Congress to provide for the extension of the work of the bureau to enable investigation and study of the races inhabiting the newly acquired possessions of the United States. He will ask that expeditions be sent to Hawaii, Samoa, the Ladrões and, if possible, the Philippines. Relative to the need of explorations in these countries, Professor Holmes says: "In Hawaii and Samoa we have to deal with some fifty thousand people representing a separate branch of the human family. These people still in a measure retain their primitive languages, beliefs, sects, industries, habits and customs, but their condition is undergoing rapid change, and the native culture will soon be obliterated. The race itself is rapidly disappearing, and so far no adequate scientific record has been made of race characteristics. A five years' ethnological survey of these islands should be undertaken by the government without delay if Congress is willing to modify the law which, as it stands, limits the research to the American Indian."

In a recent report of the Bureau of Ethnology, we learn that for twenty-six years a corps of especially trained workers has been distributed among the various Indian tribes in the United States, studying such groups as promised to yield valuable results. This has enabled a classification of the tribes into groups allied by languages, and has resulted in obtaining knowledge indispensable in the proper administration of a country where there are so many different elements of each. The work has included a study of the numerous sociological, religious and industrial problems involved, an acquaintance with which is declared to be essential in adjusting the tribes to the new and strange requirements of civilization. One of the interesting branches of the work is the compiling of a dictionary of the tribes, embodying in a condensed form the accumulated information of many years. It has been found that within the area with which the nation has to deal there are spoken some three hundred languages as distinct from each other as French is from English, and that these languages can be grouped in some fifty or sixty families. Through these investigations a deeper insight has been gained into the inner life and character of the people, and thus in a large sense of all the primitive peoples, than has reached before by any agency whatever.

Peasant Life in the Holy Land. By Rev. C. T. Wilson, M. A., F. R. G. S. This volume deals with the people rather than with the land, and that, too, from within. Many years' residence and work in Palestine have given the author exceptional opportunities of seeing the inner life of the peasant inhabitants

of the Holy Land, more especially that of the Fellahin, of which the work treats. He has been brought into closest contact with many of them, with Christian and Moslem, staying in their houses, joining them at their meals, travelling long journeys with them, often for days at a time, hearing and speaking nothing but their language. The work is therefore an authoritative as well as interesting study of one of the oldest communities in the world. (London, John Murray, 8 vo., 12 shillings.)

New Egypt. By S. B. de Guerville. In this volume M. de Guerville, who writes with the ease and wit of all cultured Frenchmen, describes his journey through Egypt, from Alexandria to Fashoda. He has photographed the remains of Ancient Egypt, sketched their history, and shown us what they are like to-day. He had conversations with the Khedive and the principal personages at his Court, and he had numerous interviews with all the most important people connected with finance, politics, and commerce. The results—and valuable results they are—of these interviews and inquiries are of much intelligent observation, he has embodied in this work. The work forms an 8 vo. with 200 illustrations from photographs. The price is 16 shillings.

With a view to aid theological students, ministers and laymen to understand the modern attitude toward the Old Testament as a whole, Professor John Edgar McFadyen, of Knox College, Toronto, has written brief commentaries upon every book and entitles his work an *Introduction to the Old Testament*. He does not enter into intricate details such as would fall naturally to a writer upon each book exhaustively; but he gives in an interesting style the chief points necessary to obtain a comprehensive view. He continually emphasizes the fact that the Old Testament is first of all a religious book. While he accepts the modern conclusions as to date and authorship in many cases, he contends that other and greater things still abide, not the least precious being "that confidence which can now justify itself at the bar of the most rigorous scientific investigation, that, in a sense altogether unique, the religion of Israel is touched by the finger of God." (A. C. Armstrong & Son, New York. 12mo. \$1.75. Hodder & Stoughton, London.)

The seventeenth volume of the "Annales du Musée Guimet" (Paris, Ernest Leroux), contains five lectures delivered at the Musée Guimet on "The Vocal Statue of Memnon," "The Recent Archæological Discoveries in Egypt," "The Museum of Greece," The Antiquities of Syria

and Palestine." and "The Chinese Drama." The second lecture deals with the discoveries made by M. Amélineau at Abydos, which relate to very early times, and those of M. Gayet at Antinoë, among which the most interesting are, perhaps, the remains of silks and other stuffs, with elaborate and beautiful patterns woven in them, which belong to Byzantine or Sassanide times. The lecture on the museums of Greece refers more particularly to Delphi, probably because the site was excavated by Frenchmen. A comparison of the work done at Delphi with that performed by the Germans at Olympia is made, with some slight disregard for the facts. The greater part of the fourth lecture is devoted to the antiquities of Asia Minor, especially Ephesus, Miletus, Priene, Pergamon, and Tralles, followed by a comparatively brief treatment of Jerusalem and Baalbek.

The Paris Académie des Inscriptions et Belles Lettres has issued a report by Maurice Holleaux, director of the French School at Athens, on the excavation in the island of Delos, instituted and carried on by the Duc de Loubat.

The *Mitteilungen der Deutschen Orientgesellschaft*, Nos. 26 and 27, gives an account of the German excavations at Babylon. In the southern palace the dwelling house with a court 7.70 m. wide and 9.70 m. deep has been completely cleared, and a second similar house has been discovered. The connection between the palace court of Nebuchednezzar and the southern palace (of Nabopalassar) has been found. The examination of the mounds called Homera, last of the Kasr, was continued, and a well-preserved theater of Greek times was discovered. The inner city wall is somewhat further east. Documents of the time of Sardapalus found here indicate that the wall "Nimitti-Bel" was at this point. The work at the eastern part of the southern citadel is now finished.

Part 3 of *Der Alte Orient* contains "Babylonische Hymnen und Gebete in Auswahl," by Professor Heinrich Zimmern. The author has succeeded in making a very interesting and representative selection of the principal hymns and prayers of the Babylonians that have hitherto been published. Professor Zimmern's ability as a translator is well known.

The Clarendon Press has recently issued the second volume of the Catalogues of Sanskrit Manuscripts in the Bodleian Library. This volume was begun by Professor Winternitz and completed by Mr. Arthur Keith. Among the new acquisitions are the famous Bower MS. and the Weber fragments (of the fifth century), several manuscripts of the tenth and eleventh centuries, and nearly five hundred MSS. of the Hultzsch collection. The importance of the present volume will therefore be apparent

to all India scholars. The first volume, edited by Aufrecht, appeared forty-five years ago, did not contain all the titles of the manuscripts then in the library, and since then there has been many valuable accessions.

The *Biblische Zeitschrift*, Vol. IV. pp. 25-38. contains an article by Dr. Aug. Blodau on the Papyrusfragmente des Neutestamentlichen Textes. It is a survey of the considerable portions of New Testament text among the Greek papyri found in recent years. Some of these are of great antiquity (fourth and fifth centuries) and preserve considerable sections of text, as for instance, the Oxyrhynchus papyrus of Hebrews.

We have received from Columbo, Ceylon, the *Maha-Bodhi, and the United Buddhist World*, formerly published at Calcutta, and is edited by The Anagarika H. Dharmapala. The object of the Maha-Bodhi Society, of which this journal is the organ, is to revive Buddhism in India, to disseminate Pali Buddhist literature, to publish Buddhist tracts in the Indian vernacular, to establish schools and to educate the illiterate millions of Indian people in scientific industrialism. The Anagarika Dharmapala has for thirteen years worked hard in the hope of re-establishing Buddhism in India. Before 1891, Buddhism was almost unknown in India, but through the work of this missionary, it has been made known all over English speaking India. Pali has been made a subject of study in the Calcutta University; Kaccayano's Pali Grammar, edited by Prof. Satis Chandra Vidyabhusan, has been published, and the Buddhist Text Society has been founded in Calcutta. There has also been published a Bengali edition of the *Dhammapada* with the Pali text. Says the editor: "For thirteen years we have labored with devotion to the cause. Mistakes we have made, but no great work can ever be accomplished without the sacrifice of life, limbs and wealth. A few Buddhists had been hostile to us in Burma, Siam, Japan, Arakan, and Ceylon. But we patiently and cheerfully preserved with the conviction that ours was a just cause. We were maligned and slandered maliciously but with the ideal example of patience of our Blessed Lord before us we harbored no anger in our hearts. Truth and Humanity is our motto and we shall expect to work in accordance therewith at all times at the risk of our life."

Contents of the *Asiatic Quarterly Review*, April. Civic Life in India. A. Yusuf Ali—Young India: Its Hopes and Aspirations. Shaikh Abdul Quadir—The Partition of Bengal and the Bengali Language. S. M. Mitea—Modern Irrigation and Navigation. J. F. Fischer—Northern Nigeria—Zarathushtra. Philo: The Achæmids and Israel L. Mills—Arabic Verbs, A. H. Kisbany—The Souls of Black Folk. R. E. Forrest—The Yunan Expedition of 1875 and the Cheefoo Convention—Proceedings of the East India Association—Correspondence, Notes and News—Reviews and Notices. Summary of Events in Asia, Africa, and the Colonies.

Ezekiel's Vision und Die Salomoneschen Wasser becker, by Dr. Ludwig Venetianer, is a pamphlet on Solomon's water-pools, showing the importance of the study of Assyriology in throwing light on certain difficult passages in the Old Testament, especially Ezekiel's Vision. (Budapest, F. K. Nachfolger.)

Contents of the *Sweden Journal of Archaeology*, Vol. x, No. 1. The Building Inscriptions of the Erechtheum. O. M. Washburn and Aug. Frickenhaus—Excavations in Corinth in 1905. O. M. Washburn—The East Wall of the Erechtheum. G. P. Stevens—American School in Rome: Report of the Director, 1904-05. R. Norton—Report of Researches conducted by the Southwest Society in 1905. F. M. Palmer—Proceedings of the General Meeting of the Archæological Institute of America—Archæological News.

The "Gunning Prize," amounting to two hundred dollars, offered by the Victoria Institute of London for the best essay submitted by any of its members or associates on the subject, "The Bearing of Recent Oriental Discoveries on Old Testament History," has been awarded to Rev. John Urquhart, of New Zealand. The Victoria Institute has granted the *Sunday School Times* the authorized rights to publish the prize essay, and later in book form. The essay is something over 20,000 words in length, and will make six articles in the *Times*. The first article in the number for May 6, considers the Books of Chronicles, in which the author states that researches and excavations in Palestine illustrate the minute accuracy of these books.

Contents of *The American Journal of Semitic Languages and Literature* for April. President Harper and Old Testament Studies. Francis Brown—The Hebrew Stem Nahal, to Rest. Paul Haupt—Toffteen's Glossary to Harper's "Geographical List of Assyrian and Babylonian Letters — Mamimilian Streck — A Letter of Esarhaddon—Christopher Johnson—Zu dem Berichte über die Niederlage der Turkomanen bei Kairo. Samuel Poznanski—Assyriological Notes. C. H. W. Johns.

Contents of *Man*, April. Burial Customs of the Wa-Kavirondo in the Kisumu province. A. S. Millikin—Note on a Series of Akikuyu "Ndomi" in the British Museum. T. A. Joyce—Anthropology at the Universities. C. H. Read—Note on a Cranium found in a Cave in the Baram District, Sarawak, Borneo. W. L. H. Duckworth—Egyptian Craniology. A. Thomas and D. Randall—MacIver—Negative Magic. J. G. Frazer—Questiones Toemicæ. A. Lang.

In the April *Monist*, Mrs. Alice Grenfell, wife of the well-known English Egyptologist of Oxford University, has an ar-

ticle entitled "Egyptian Mythology and the Bible," in which she finds many parallels in the literature of Egyptian Mythology to passages in both the Old and New Testaments. The article is illustrated with several reproductions from research and the various papyri of the Book of the Dead.

M. Naville has been working at Deir el-Bahari for the Egypt Exploration Fund. He has excavated the temple of Mentuhotep III, laying bare the ramp, the southern colonnade, and the great central platform. This last structure was apparently not the base of an actual pyramid, and soundings have failed to reveal any tomb within its area. Around it, however, several tombs of priestesses and princesses were disclosed, one of the latter adorned with quite remarkable sculptured reliefs, representing the life of Princess Kauit in the lower world. The work at Deir el-Bahari is not yet completed. The next memoir of the fund will treat of Deir el-Bahari.

FRAGMENTS OF THE GOSPELS ON EGYPTIAN POT-SHERDS.

Adolf Deissmann writes in "Die Christliche Welt:":

Eberhard Nestle in his Introduction into the Greek New Testament remarks: "In the ostraka-literature now so numerously found, as it seems, fragments of the N. T. have so far not been shown." Writing in the year 1899 he was probably correct in this statement; but in the mean-time W. E. Crum in his "Coptic Ostraka" [not to mention the sherd containing the Lord's Prayer, found by Rudolph Knopf at Megara] has published several Greek ones containing scripture-words, among them two texts from the gospel acc. to St. Luke.

Much more significant, however, is a publication of the chief-inspector of the commission of antiquities at Assiout, Egypt, Gustave Lefebvre: *Fragments Grecs des Evangiles sur Ostraka** This publication allows us to inscribe a hitherto blank page in the history of the N. T. It gives the text of twenty larger or smaller Greek ostraka with fragments from our gospels. These sherds, which had already been bought some time ago in Upper Egypt by Bouriant make an ornament of the Institut Français L'Archéologie Orientale. The exact site and the circumstances of their first discovery could not be ascertained any more, but their genuineness is beyond doubt. Their age may be assumed from the character of the inscriptions: the sherds were written in the 7th century p. X. n., at the time of the Arabian conquest.

* Bulletin de l'Institut Français d'archéologie orientale t IV, Le Caire 1904

They offer to the learned investigator of the Gospels especially in the line of Palæography and text-history interesting material, which it is to be hoped, will be duly noticed. They contain, written by three different hands, the texts: Matth. 27, 31-32; Mark 5, 40-41; 9, 17, 18, 22; 15, 21; Luke 12, 13-15*, 12, 15-16; 22, 40-45; 22, 45-49; 22, 49-53; 22, 53-54; 22, 55-59; 22, 59-60; 22, 61; 22, 61-64; 22, 65-69; 22, 70-71; John 1, 1-9; 1, 14-17; 18, 19-25; 19, 15-17.

From this it appears that St. Luke's is most abundantly considered; two ostraka have the uninterrupted text of Luke 12, 13-16 and 10 ostraka even the entire text of Luke 22, 40-71, i. e. a considerable part of the history of Christ's passion. These ten ostraka have been marked by the scribes with the numerals 1-10, which indicates that they belong together. Thus also the Johannine fragments do not probably come from different owners but belong likewise to one and the same set. This observation is important in a two-fold way: first it points out that probably all these gospel-ostraka were derived from one find. [this is also shown by the circumstance, that the fragment Mark 9, 3, is written on the reverse side of one of the Luke-sherds† forming a part of the history of the transfiguration, which is then continued on one of the Mark-sherds]; second it indicates the general character of these Bible-sherds so far as they answer the question: for what purpose did they presumably write gospel-words on these ostraka?

††On the reverse side of this ostrakon (No. 5) are in addition to the name Luke some lines which the publisher could not interpret, they are (transcribed) as follows:

STILBONT(

OI(-)NAFE(

Deissmann says, they are certainly fragment of Mark 9, 3:

STILBONT(A LEVKALIAN)

OI(AG)NAFE(VS etc.)

Στίλβοντα λευκά λίαν, οἷα γραφεὺς κ.τ.λ.

If only the single piece, which is inscribed with the words Mark 9, 17, s.s. had been transmitted, the thought would suggest itself, that these Bible-words had been used as healing amulets, in this instance as an amulet against demoniac possession. Accordingly the publisher announces, that Perdrizet suggested the hypothesis, these ostraka might have been amulets. However the series of these ten pieces belonging together and the other series which may be presumed, suggest another more probable explanation. That anybody should have carried about with him 10 pieces of ostraka as amulets, is unconceivable from the simple

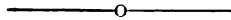
reason that they are much too heavy for an amulet. Thus it will be safe to adhere to the conjecture of Lefebure, that the sherds were inscribed in order to produce a cheap gospel-lectionary with selected pericopes or perhaps the continuous text of the four Gospels. He who knows the character of the ostraka stands now at the door of understanding the real importance of the new find. The ostraka were as a rule the writing material of the poor, the sherd could be had for nothing even in the scantiest household, when a naughty nobody had broken the oil-jar or the dough-dish. He who was at all particular about his station would not easily write a letter on a pot-sherd, except in a case of embarrassment and then he would excuse himself of being far out in the country where no papyrus was obtainable.* He who wrote gospel-texts (or had them written) on ostraka, certainly belonged to the poor, perhaps he was a monk or a school-boy or a woman from among the number of other nameless ones.

Therefore we may write above the beautiful publication of Lefebure's the words: The gospels in the hand of the low people; the gospel with the poor in Egypt at the time of the influx of Islam.

In the same class of society from which the gospels come—these most popular texts of the whole antique world in which for the first time the language of the common people enters vigorously into literature—in the same rank we here recover the gospels after 6 centuries, after they had been read in the meanwhile by thinkers and potentates, the rich and the famous on papyrus, parchment yea even purple parchment in letters of gold. After their long migration through the world the gospels have returned home, on worthless thrown-away pot-sherds a forgotten-one, a nameless-one, writes the imperishable words which are the property of the poor.

—Translated in abstract by C. Reinhold Tappert.

Meriden, Ct.



A Corpus of new Babylonian inscriptions which have been prepared for publication by Stephen Langdon, the well known Oriental scholar, is soon to be published by the Paris house of Leroux. The first volume is already finished in manuscript, and contains the inscriptions of Kings Nabopolassar and Nebuchadnezzar. The editor has not confined himself to inscriptions which were found on Babylonian soil, but embraces also those which were unearthed elsewhere, e. g., such as were carried by the Kings of Persia to Susa, and were recently found there by French savants.

* Such and similar formulas are to be found in the Coptic sherd letters of Crum's Collection.

THE PTOLEMAIC AND ROMAN PAPYRI

In addition to various volumes produced by the "Egypt Exploration Fund," the British and Berlin Museums and those containing selections from the Austrian Archduke Ranier collection, others in private hands are now being edited, such as those in the possession of Lord Amherst, and now we welcome a little corpus of a collection acquired by M. Theodore Reinach in Egypt in 1902.

Though in it the literary fragments are few and quite uninteresting the legal documents are numerous, in many cases excellently preserved and legible, and most valuable for the study of Greco-Egyptian law. The volume in which these records are published is edited by M. Reinach with the assistance, for the Greek manuscripts, of M. Seymour de Ricci, and for the Demotic ones of Prof. Spiegelberg. It is dedicated to "Ioanni Mahaffy, vivo doctissimo et amicissimo studiorum communium egregio propugnatori sacrum," an example of the cosmopolitan character of learning, and a worthy recognition of the British scholar, who, by his rendering of the difficult Petnepapqri of the same era as these was published by M. Reinach, lightened the labors of subsequent scholars in deciphering similar manuscripts.

The chief items of the Reinach papyri consist of a series of documents which, although acquired at ashmunein, the ancient Hermopolis Magna, evidently originally came from Tehneh, the old Akoris. They almost all concern the family of a certain Dionysius, son of Kephalos. The majority of these papyri are engrossed in Greek, the minority in Demotic.

Akoris is referred to by the "Ravenna Geographer" and by Ptolemy. It is situated 11 kilometres from Minieh, 1,500 metres east of the Nile. That it and Tehneh are identical is proved by a late papyrus which unites the two names.

Ptolemy places it in the Kynopolite Nome, but all the new papyri speak of its being an Hermopolite town, from which it would appear that the Kynopolite Nome extended further to the south, in the time of Ptolemy and the extant geographers, than when the papyri were written.

M. Reinach gives the genealogy of the family as indicated by the papyri, endeavoring to trace alliances between Greeks and the indigenous Egyptians. This part of the work is followed by a chronology of the contracts, which date from 143 to 103 B. C.

It is in connection with this portion of the subject that the historical value of these papyri is illustrated because they are dated under Ptolemy VII. Psycon; Ptolemy VIII. Soter II., who was exiled to Cyprus, and Ptolemy IX. Alexander, who reigned

with Cleopatra III. To summarize M. Reinach's description of the Akoris military colony would occupy too much space, but the vocabulary of Egypto-Greek officers and functionaries connected with troops of various kinds is illustrated and enlarged and a new official of this class, the Tagma, or Tagmatos, is discovered who is identical with a personage in the almost contemporary "Letter of Aristeas," which describes the circumstances of the translation of the LXX. This coincidence is certainly corroborative of the genuineness of the "Letter of Aristeas."

The regimental names appear to have been derived from the Hipparkes, or Colonels, but whether that of the acting commandant for the time being was used or that of some celebrated officer retained after his promotion, or retirement, is uncertain.

The legal formulæ in numerous contracts are interesting not only to jurists, but to the "man in the street." The grain upon which loans were secured, or which, as is much more frequent, was sold upon credit, and remitted to the royal treasuries as rent, or tribute in kind, had to be the product of the recent harvest, therefore fresh; it must be compact 123456789, that is, as said in

With the exception of a sitologos' receipt, the whole of the Dionysius *dossier* from Akoris concerns himself or relatives.

Dionysius also possessed an Egyptian name rendered in the Greek as Plenis * * * * * As a supplementary designation he is styled a "Persian of the Epigone;" but was not necessarily of even Greco-Persian, much less Persian, origin. Because in other papyri of similar character we have persons entitled Persian, Libyan and Macedonian who certainly were not of those races.

These descendants of veterans were probably the offspring of Alexander's body guard of mixed Persian, Libyan and Macedonians upon whom were bestowed Egyptian land, but the battalions ethnically named after the three races could and did enlist troops of many different nationalities, as have Hulans, Zouaves and Highlanders in later times. For instance in one document in the Tebtunis papyri a man is called a Macedonian, whilst in another papyrus the same personage is styled a Cretan.

Dionysius was a military cultivator of the royal demesne, not, as were so many personages in the Petrie papyri and those found by M. Jorguet and others, a Klerouch,* or holder of a territorial military fief. A basilikos georgos farmed the royal land, rendering a portion of the harvest to the king's officials, retaining the remainder for his own support and for seed.

In addition to the areas Dionysius had to cultivate upon the above terms for the king, his accounts prove that he rented, or owned, several other pieces of ground. An important member of the family was Serapeus, mother of Dionysius; she also bore the names Senabellous and Demetria, and appears in the documents as security for her son.

Contents of the Proceedings of the Society of Biblical Archaeology, Vol. 28, Part 2. The "Star of Stars" and "Dilgan", (continued), Miss E. Plunket.—The Zouche Sahidic Exodus Fragment, S. de Ricci.—To what race did the founder of Sais belong? P. E. Newberry. The Folklore of Mossoul, R. C. Thompson.—A New Carved Slate, F. Legge.

Evidence has lately been accumulating, says Mr. Newberry, to show that the inhabitants of the Delta in the earliest historical times differed to some extent in race and culture from those of Upper Egypt; but we are still in the dark as to who these people really were. The object of the present paper is to draw attention to a very interesting fact regarding the dwellers in the North-Western Delta which has as yet escaped the notice of archaeologists. Mr. Newberry shows that the shield used by the early people of Sais, in the Western Delta, was of different form to that employed by the Upper Egyptians, and that it was of identically the same shape as that used by the Mycenaeans, the so-called Hittites, and the aborigines of Latium. The question therefore naturally suggests itself. In what way were the inhabitants of the Western Delta related to the people of the North-eastern Meriterranean? Mr. Newberry proceeds to answer the question as follows:

Inhabiting the Delta in very early times were a mysterious people called the Haau, or "Fenmen", foreigners to the Upper Egyptian Dynastic race, to whom it was expressly forbidden to communicate any of the magical formulæ of the Book of the Dead. Whether these people were the same as the Ha-nebu of later times is not certain, but Neith in a late inscription—of the time of Nectanebo—is called 'Mistress of the Mediterranean', and in this quality accorded to the king 'all foreign lands', and he in return dedicated to the temple of Neith a tenth of all the things which came from 'the Great Green Sea of the Hau-nebu'. Now Neith has been identified with the armed divinity we know as Pallas Athene of later Greece, and there is a tradition recorded by Plato that 'the founder of Sais was a goddess whom the Egyptians called Neith, the Greeks Athene; and its inhabitants', he further remarks, 'are themselves in some way related'. Later Greek writers describe Cecrops (a hero of Pelasgian race) as having emigrated into Greece with a band of colonists from Sais, and Diodorus says inconsistently in one passage that Sais sent a colony to Athens, and in another that Sais itself was founded by Athenians.

The International Congress of Anthropology and Prehistoric Archaeology will hold its thirteenth session at Monaco, April 16 to 22 inclusive, under the patronage of Prince Albert I. The secretary, Dr. R. Verneau, 61 Rue de Buffon, Paris, will furnish all necessary information.

We had the pleasure upon its appearance of noticing in *Biblia* Dr. Paul Deussen's *Sechzig Upanishads des Veda*. We

are pleased to receive from Messrs. T. & T. Clark of Edinburgh, Dr. Deussen's *Philosophy of the Upanishads* (8 vo. 10s. 6d.). The translation is made by Professor Geden of the Wesleyan College in Richmond. It is such an introduction of the Religion and Philosophy of India as English readers have long been seeking. Professor Deussen is recognized as easily first in this line of study at the present day. There has also just been published by Luzac (1s. 6d.), Dr. L. D. Barnett's *Some Sayings from the Upanishads*. Both books represent the very cream of Indian scholarship.

There have recently been placed on exhibition in the Egyptian Hall of the New York Metropolitan Museum of Art, some specimens of ancient tools which show the conservatism that rules in the stonemason's art. They consist of three mallets, or light mauls, used upon the metal tool employed to shape building stones or to cut the complicated hieroglyphic characters upon stone. These mallets were left by the Rameside workmen of the new kingdom at least eleven hundred to twelve hundred years before Christ, and were discovered a year or two ago by Eduard Naville in the course of his investigations at Deir el Bahara, opposite Thebes. They are made of very hard wood—possibly pear—with a red heart, resembling mahogany, and cut from a single block, in this respect being different from those now in use. The Egyptian specimens have the handle cut from the core of the tree, the head is left of the original size of the trunk, and only slightly shaped by being tapered toward the hand.

In the same case is shown a hoe made of two pieces of wood. The handle passes through a hole in the shaft of the blade, and is bound in place by a cord. This implement dates from the XXth Dynasty (say 1,200—1,100 B. C.), and was found in the rubbish heaps in the newly uncovered temple of Nebhapet-ra-Mentuhotep. Beads, votive offerings, lamps, earthenware and a large variety of these objects from Deir el Bahari, Oxyrhynchus and Ehnasya are contained in the same case.



A HISTORY OF EGYPT FROM THE EARLIEST TIMES TO THE PERSIAN CONQUEST.

By James Henry Breasted, Ph. D.

Still another history of Egypt. Within a few years we have had Professor Flinders Petrie's work, portraying all of Manetho's thirty dynasties; Budge's work in eight volumes, giving the history of Egypt from the end of the Neolithic period to the death of Cleopatra VII., B. C. 30; and now we have Dr. Breasted's history from the earliest time to the Persian Conquest. No doubt Professor Petrie's work is the best and most inclusive history of Egypt in English, but it is a book for students and specialists. For many years he has labored in Egypt laying bare multitudes of sites, and he has kept an accurate record of his ex-

cavations and discoveries just as he found them. His work is a mine of historical information up to date. However, no history of Egypt will be finished till the last monument is found and all the mountain tombs have given up their story. Nearly as much remains under ground as has yet been brought to light.

While the reader will find in these recent works the most authentic account of Egyptian history yet given to the public, yet the progress of archæological research and a further discovery of documents not yet used may call for large modifications of present judgments. As Dr. Breasted says: "Egyptian archæology is in its infancy, and but few of the fundamental studies and researches already completed in classical archæology have been made in this province. . . . The study of Egyptian religion has just begun, and decades will pass before even the preliminary special studies shall have been completed, which shall enable the student to go forward for a general survey and symmetrical reconstruction of the phenomena in one comprehensive presentation which shall be in some degree final."

Dr. Budge's work is a mine of information, but second hand. The reign of each king is described and the bare facts of history enumerated, and extracts are given from papyri and stelæ and other Egyptian documents, which seem to illustrate the condition of the country, both civil and military, during the period of his rule. Although the main facts given in Budge's work are derived from ancient Egyptian monuments and papyri, the reader who wishes to study at first hand is referred to published works in English, French, and German, wherein he will find the Egyptian texts, often with translations and elaborate introductions.

Dr. Breasted has compiled a work intended to be popular, and to interest the general reader, and he has not hesitated to call to his aid such authorities as Weidemann, Erman, Eduard Meyer, Winckler, Maspero, Petrie, and others. It is noticeable that the place of Egypt in Hebrew tradition receives scant attention, and the Biblical student will be disappointed that more adequate consideration has not been given to the Biblical problems which arise in connection with it. To our mind he places an unduly high value of the influence of the Egyptians on the earliest civilization of Southern Europe. The religion of the Ancient Egyptians is necessarily but lightly touched upon; only the Amarna period and the solar faith have been made the object of the author's special attention. In this connection we would call the attention of the reader to Professor Steindorff's recent work "The Religion of the Ancient Egyptians." His little book of 178 pages is the result of many years' study of one of the ablest and most brilliant of the younger school of Egyptologists in Germany. It is the most reliable, readable, and sane treatment of the religion of Egypt which has yet appeared. Dr. Breasted is gifted with a brilliant imagination and he writes

in a vivacious style with an easy flow of language, and he presents the dry details of Egyptian history with great lucidity, and they may be accepted as embodying the latest results of research. With our present knowledge of Egyptology, including the remarkable discoveries of late years, material has been placed before the English student, which makes it a comparatively easy task to prepare a history of Egypt. Dr. Breasted's work is based upon the latest scientific researches, and is free from technicalities, and it gives a clear and concise exposition of his own investigations.

The book is admirably printed and attractively bound. It has 186 illustrations, some of which are old friends, but many of which are new. It has a very full index, but the absence of a bibliography is greatly to be regretted.

(New York, Chas. Scribner's Sons, 8 vo., pp. 634, price \$5.00).

LETTER OF ESAR HADDON.

Translated.

In *The American Journal of Semitic Languages and Literatures* for April, Professor Francis Brown, of Union Theological Seminary, has the leading article on "President Harper and Old Testament Studies." Professor Brown aims to give a critical estimate of President Harper's work as a teacher, scholar, commentator and editor, and to define his influence in the renascence of Semitic studies in America during the past twenty-five years. Professor Paul Haupt, of Johns Hopkins University, has an interesting and conclusive article on "The Hebrew Stem Nahal, To Rest" and in Note 25, he discusses at some length the Biconsonantal Theory. Dr. Maximilian Streck, of Strassburg, Germany, gives an interesting series of "Notes on the Geographical Names in R. F. Harper's Assyrian and Babylonian Letters." This article is a *critique* of Dr. Toffteen's Lists of Geographical Names published in the Jan. (1905) no. of *AJSL*. The Rev. C. H. W. Johns, of Queens College, Cambridge, England has a most interesting series of Notes: (1) Some Further Notes on the Code of Hammurabi; (2) Some Notes on the Geographical Names in R. F. Harper's Letters; (3) Some Additions and Corrections to the "Political, Religious and Social Antiquities of the Sargon Period." Nos. 1 & 2 are of interest to the layman. No. 3 is a full discussion of Dr. A. H. Godbey's Doctor Dissertation. Mr. Johns agrees with Dr. Godbey on the chief historical and political questions considered. Professor Christopher Johnston, of Johns Hopkins University, translates a very interesting Letter of Esarhaddon

(Bu. 91-5-9, 210; Harper 403). This Letter is of much importance historically and contains several proverbs or popular sayings. The Translation follows:

The word of the king to the self-styled Babylonians! It is well with me! There is a popular saying current, to this effect: "The potter's dog creeps into the oven; the potter makes up the fire." Behold! you have turned yourselves into Babylonians, although indeed it is not true (that you are such), and you have made against my servants lying accusations which you and your lord have concocted. There is also a saying current: "Madam Gay at the judge's door; Madam Judge to her pitcher." The tablet (full) of windy words and of your complaints (?) which you have sent, I have put back in its seals and send it to you. If you say "What answer does he make us?" (I reply): When I opened (your letter) and read (your words) that the "Babylonians my loving servants have sent" (I said). . . .

Dr. Schulim Ochser, Officer Editor of the *Jewish Encyclopedia*, gives a translation of "A Mandæan Hymn, on the Soul" as a summary of the doctrines of their religion. "Going toward a river, the soul, in the poet's vision, meets Shitil, one of the first emanations, whom it urges to accompany it to receive baptism 'in the name of life.' When asked what witnesses it can bring to vouch for the good deeds which it has done in the body, it names the sun, the moon, and the everlasting fire, but it receives answer that all these will fail it, and that it can therefore have no witness for life eternal. Finally, however, it cites as witnesses the Jordan, the Pehta, the Sundays, charitable deeds, the temples, and God himself. These are the true witnesses, who can give it entrance to the future world.

"Though this brief fragment breaks off at this point, it affords a clear idea of the view of the future state of the soul according to the religion of the Mandæans."

TRANSLATION.

I.

In the name of life!

From the Jordan I ascended,
The primal form of the soul I met;
I met the primal form of the soul,
Which is inclosed in our father Shitil;

I spake to him:

By thy life, O Father Shitil,
Go thou with us unto the Jordan!
Or I shall go with you unto the Jordan!
Will there be a witness with you?
The setting sun shall testify for us.

It is not this which I desire,
Nor is it this which doth baptize the soul.
The sun of which thou speakest
Arose, set, it grew dark, the evening came on;
The sun of which thou speakest,
The sun is destroyed,
Destroyed is the sun,
And they who worship him are annihilated.

II.

From the Jordan I ascended,
The primal form of the soul I met;
I met the primal form of the soul,
Which is inclosed in our father Shitil;
I spake to him:
By thy life, O Father Shitil,
Go thou with us unto the Jordan,
Or I shall go with you unto the Jordan!
Will there be a witness with you?
The setting moon shall testify for us.
It is not this which I desire,
Nor is it this which doth baptize the soul.
The moon of which thou speakest,
It grew dark, set, arose, the evening came on;
The moon of which thou speakest,
The moon is destroyed,
Destroyed is the moon,
And they who worship it are annihilated.

III.

From the Jordan I ascended,
The primal form of the soul I met;
I met the primal form of the soul,
Which is inclosed in our father Shitil;
I spake to him:
By thy life, O Father Shitil,
Go thou with us unto the Jordan,
Or I shall go with you unto the Jordan!
Will there be a witness with you?
The blazing fire shall testify for us.
It is not this which I desire,
Nor is it this which doth baptize the soul.
The fire of which thou speakest
Will perish some time in the day.
The fire of which thou speakest,
The fire is dead,
Dead is the fire,
And they who worship it are annihilated.

IV.

From the Jordan I ascended,
 The primal form of the soul I met;
 I met the primal form of the soul,
 Which is inclosed in our father Shitil;
 I spake to him:
 By thy life, O Father Shitil,
 Go thou with us unto the Jordan,
 Or I shall go with you unto the Jordan!
 Will there be a witness with you?
 The Jordan and its two banks will testify for us,
 The Pehta and Kushta and Mambuga will testify for us,
 Sundays and the foundations of almsgiving will testify for us,
 The dwelling and the house in which we thrive will testify for
 us,
 The almsgiving from our hands will testify for us,
 Our father, who standeth at our head, will testify for us.
 It is this which we desire,
 And it is this which doth baptize our soul.
 And when I ascend to the house of the life, and go to the
 abode of glory,
 And when I am asked what witnesses of life shall testify for us,
 Then there are witnesses of truth, and true is all they say!
 And life is victorious.

The First and Second Volumes of Professor James Henry Breasted's *Ancient Records of Egypt* have recently appeared from The University of Chicago Press. Volumes Three and Four are in press and will be published before August 1st. Professor Breasted has given ten years of labor to this work and he offers to Egyptologists and students of history a Corpus of Egyptian Inscriptions on a scale not previously attempted and with a degree of accuracy never before attained. The inscriptions are arranged chronologically and extend from the earliest records to the final loss of Egyptian independence by the Persian conquest in 525 B. C. They are accompanied by historical introductions, explanatory notes and a full analytical index.

Professor James R. Jewett has in press the *Mirât-az-Zamân*, which will appear in June. Among Arabic works which furnish more or less material for the history of the Crusades, the *Mir'ât az-Zamân* of Sibî ibn al-Jauzî* has long been known to western scholars. Though the work is an extended one, yet practically the whole of it, down to and including the events of the year 633 A. H., exists, one part here and another there, in the various libraries of Europê. The last part, however, covering the period beginning with the year 534 A. H. and extending to the year of the author's death, just that part of the

history, namely, as to which the author might well be supposed to have been able to secure the fullest and most accurate information, was, till recently, regarded as unfortunately missing. Now it happens that in the library of Yale University, among the collection of Arabic manuscripts made by Count Landberg, and so generously given to Yale by Mr. Morris K. Jesup, there is a manuscript of precisely this part of the *Mir'at az-Zamân*. This manuscript (Yale 136 begins with an account of the year 495 A. H., and extends to the year 654 A. H., the year of the author's death. The importance of this manuscript was recognized by Landberg, and need not be enlarged upon. Study of the manuscripts in London, Oxford, Leyden, and Paris, this summer showed clearly that this manuscript differs markedly from the European manuscripts of that portion of the *Mir'at az-Zamân* that covers the years from 440 A. H. on, and evidently belongs to a different recension. The relation of Yale 136 to the manuscripts referred to above will be discussed in the introduction to a critical edition of the text, in preparation for which certain photographs and copies have already been made. For the present it is sufficient to say that, through the liberality of the authorities of the Yale library in loaning the manuscript to the University of Chicago for an extended period, it has been possible to prepare a fac-simile edition of it, and that this edition will be published in a few months. There will be 529 pages of Arabic text, twenty-five lines to the page, also a very short introduction and a table of errata which, it is hoped, may be even shorter. It is hoped that this edition may be instrumental in extending the interest in, and the knowledge of, this great Arabic history.

*For an account of the author and of the various MSS. of the work, cf. Wüstenfeld's *Die Geschichtschreiber der Araber*, No. 340, and Brockelmann's *Geschichte der arabischen Litteratur*, Vol. 1, pp. 347, 348.

THE ELEVENTH SERIES OF LECTURES ON THE HASKELL FOUNDATION.

"The Religious Attitude and the Religious Life as Developed in Islam" is the general subject of the new series of lectures on the Haskell Foundation which is being delivered in Congregation Hall by Professor Duncan B. Macdonald, A. M., D. B., of Hartford Theological Seminary. The first lecture, given on April 10, had as its subject, "The Attitude of the Semites toward the Unseen World; Prophecy as a Semitic Phenomenon—Especially Among the Arabs." The dates and subjects for the remainder of the course are the following:

April 12, "The Muslim Conception of Prophecy and Soothsaying."

April 17, "The Muslim Conception of Intercourse with the Unseen World in Sleep."

April 19, "Other Means of Intercourse: Wizards, Magic, Talismans; Utilitarianism in Islam."

April 24, "Intercourse through the Jinn: Spirits, Demons, Ghosts in Islam."

April 26, "Saints and the Ascetic—Ecstatic Life in Islam."

The Haskell Lectureship on the "Relation of Christianity to Other Religions" was established by Mrs. Caroline E. Haskell, and the lectures are given annually. The tenth series was delivered in January and February, 1905, by Professor George Foote Moore, Ph. D., D. D., of the Harvard Divinity School, on the general subject of "Some Fundamental Problems in the History of Religion."

A NEW SERIES OF BARROWS LECTURES IN INDIA.

President Charles Cuthbert Hall, of the Union Theological Seminary, New York, who is to give the "Barrows Lectures" in India next winter, is about to spend several weeks in Oxford, England, in active preparation for the course in question. The subject of the series of lectures is "The Witness of the Oriental Consciousness to Jesus Christ."

The Barrows Lectureship on the "Relation of Christianity to Other Religions" was established by Mrs. Caroline E. Haskell, and the lectures on this foundation are delivered every three years in the cities of India.

In October, 1903, President Hall, in his introduction to the series of "Haskell Lectures" at the University, gave a report of the Barrows Lectureship in India, Ceylon, and Japan, 1902-3; and the lectures then delivered were incorporated in a volume and published by the University of Chicago Press under the title of *Christian Belief Interpreted by Christian Experience*. Among the places in which the course was given by President Hall were the five university cities of Calcutta, Allahabad, Lahore, Bombay, and Madras.

Under the auspices of the American Committee for Lectures on the History of Religions a series of six lectures on "The Development of Religion in Japan" was given by Professor George William Knox, D. D., LL. D., of Union Theological Seminary, in Haskell Oriental Museum, beginning with January 15, the first lecture being entitled "Primitive Beliefs and Rites: Natural Religion." The subjects of the remaining lectures were as follows: "Shinto, the Way of the Gods: Natural Religion"; "The Introduction of Buddhism: Supernatural Religion"; "The Development of Buddhism: Supernatural Religion"; "Confucianism as Polity and Ethics: Ethical Religion"; and "Confucianism as the World-Order: Ethical Religion."

Egoism is the title of a small volume, of 137 pages, recently published by the University of Chicago Press, the author being Mr. Louis Wallis. Among the chapter headings are "The Egoistic Proposition," "The Bible and Egoism," "Israel's Religion Before the Exile," "The Revolution," "The Writing Prophets," "The Exile and After," "Jesus of Nazareth," and "The Practical Issue." In the preface the author says that the egoistic proposition is within the domain of sociology; and if we would grasp the significance of the Bible, we must approach it, first of all, as a social phenomenon. The logical ultimate of higher criticism is that the total body of religious conception in the Bible arose out of, and in dependence upon, the so-called secular experience of Israel.

The meeting of The American Oriental Society was held in New Haven, April 17-19. The president's address was given by Dr. Gilman on Recent American Contributions to our knowledge of the Orient. Professor Crawford H. Toy of Harvard University was elected President to succeed Dr. Gilman, who had served the Society faithfully for thirteen years. Professor Jastrow, of the University of Pennsylvania, read an interesting paper on the subject, "Did the Babylonian Temples have Libraries?" and he reached the conclusion that general libraries were not preserved in the temples. Another paper by Jastrow, on Tabi-Utul-Bel, gave an interesting parallel to the Book of Job. Professor Lyon of Harvard read on (1) Female Votaries in the Time of Hammurabi; (2) Seal Impressions on Contracts; and (3) Abbreviated Legal Expressions. Dr. Lyon, in his first paper, held that the "sisters of the gods" were vestal virgins and not disreputable women. Professor Moore read an interesting paper on a so-called Egyptian Ephod. Professor Torrey gave textual emendations to several Phœnician Inscriptions. Over thirty new members were elected. Professor Robert Francis Harper, of the University of Chicago, was elected a Director to fill the vacancy made by the death of President W. R. Harper. The Society will meet next year in Philadelphia.

M. HAKKONER.

Book Reviews

THE DEVELOPMENT OF PALESTINE EXPLORATION, being the Ely lectures for 1903, by Frederick Jones Bliss, Ph.D., author of "A Mound of Many Cities; Excavations at Jerusalem." New York: Charles Scribner & Sons, 1906.

This book commences with the dawn of explorations. The method of fixing a place by latitude and longitude, did not begin until the 16th century, but the list of the stations followed by the Israelites, can be identified by the topography. The first presentation of Syrian Palestine, was about 1493 B. C. Another mention was after the time of Senacherib. Pliny described the topography of Syria and Palestine. The expedition of Alexandria was in the 2nd century, also that of Ptolemy. Josephus is also good authority, as is Eusebius A. D. 340. Jerome traveled in the Holy Land, as did Alexander, bishop of Constantinople. In the time of Justinian, about 530 B. C., a short description of Jerusalem was given. Arculf visited Palestine in 615. He was the bishop of Gaul. The Monk Bernard entered Palestine in 750. Duke Robert of Normandy and the Anglo Saxon Browelf told the story of their pilgrimages. Theodric described the Holy Places. In the 13th century Benjamin of Tudela visited Palestine, as did Bocardus in 1283. Berchard gives an account of the crusade period, during the 14th century. A Venetian presented to the Pope John a book, which gives the geography and maps of Palestine. Sir John Mandeville in 1371 described the Holy Land. From Fabri 1480 to Robinson's time, exploration went on apace. The great work was done by an American citizen. "Robinson's Researches" are still excellent authority; Renan and his contemporaries followed. The Palestine exploration fund was established in 1865. Such is the history in brief given by Mr. Bliss. The book is a valuable one, and is written by a well-known explorer and author. The reader will find it both interesting and reliable.

THE FUTURE LIFE AND THE LIGHT OF ANCIENT WISDOM AND MODERN SCIENCE. By Louis Elbe. McClurg & Co., Chicago, 1906.

The author of this book speaks of the belief among prehistoric races, and modern savages, also of Chinese ancestor worship. These beliefs are shown by the sepulchral stones, by the inscribed drawings, and by the symbols. The practice of embalming bodies was practiced among the Peruvians, as well as the Egyptians. The prevalence of ancestral worship among the Chinese, is well known. It appears also they believed in a future state. The Egyptians believed the Ka to be a divine spirit. Set was the astral body and Sahn the double. They viewed the sun as the sole creator. The Hindus also believed in the future state, but sacrifices were necessary to be received in the land of the blessed. There was a theory of reincarnation, common among the Hindus. The Chaldeans believed that there were two warring principles, but that in the end, the evil one called Ahriman would not exist in the universe. The Gauls and the Celts believed in the future. The Druids had ceremonies which showed their faith in immortality. Sacrifices were practiced within the stone circles by the Druids. The Greeks believed in the shades, which were invisible. The "mysteries" were founded upon the belief in the future. The Romans practiced ancestral worship. They believed that these deities were present. The Divinity of the Hearth was worshipped.

The future life, according to this author, is proven by astronomy, by physical sciences, and by biology. The Border Land of science is vague and shadowy, but this author seems to think that there is an Ethereal Double, and there are manifestations at great distances. The latter

theory is somewhat novel, and does not belong to the department of Eschatology, but must be considered as a department by itself.

THE LIFE STORY OF HENRY CLAY TRUMBULL, missionary, army chaplin, editor and author, by Phillip E. Howard, with an introduction by E. Gallaudet Trumbull, Philadelphia Sunday School Times, 1905.

Mr. Trumbull was born in Stonington, Conn. He moved to Hartford and joined Dr. Hawes' church, was active in mission schools. Mrs. Sigourney and Mr. Gallaudet were then living in Hartford. He became interested in the Sunday school work and began to write for the Sunday School Times. This was in 1859. He entered the army in 1861 and became chaplin, was taken prisoner, and was sent to Libby prison. He was very useful as a chaplin. It was the influence of Dr. Bushnell's teachings that moulded the character of Mr. Trumbull. After the war, he became editor of the Sunday School Times, but the event which will most interest the archæologists was his finding of Kadesh Barnea. He wrote a book on this subject which is very valuable. Prof. E. H. Palmer tried in vain to find the site. This was the beginning of his work as an author and editor. He wrote upon the Rite of Blood Covenant, a valuable and original book. His work as editor of the Sunday School Times continued for many years. He was president of the Oriental Club of Philadelphia, and was a leader among men, and was a reliable scholar as well as editor.

GEOLOGY. By Thomas C. Chamberlin and Rollin D. Salisbury, heads of the Departments of Geology and Geography, University of Chicago. In three volumes. (New York, Henry Holt & Co.) Volume I, Geological Processes and their Results, 1904; pp. xix, 654. Volumes II and III, Earth History, 1906; pp. xxvi, 692, and xi, 624.

The relations of geology and anthropology, which most interest the readers of this journal, are the parts of this monumental work to be especially noticed here. From the great attention given by each of these authors to the Glacial period in former reports of the geological surveys of Wisconsin, New Jersey, and the United States, and from their very ample discussions of the same period in the present work, anthropologists must consult and study their writings in any thorough investigation of the antiquity of man and his connection with the Ice age.

In the first volume, treating of Geologic Processes, or the ways in which the surface of the earth undergoes changes, chapter v, "The Work of Snow and Ice," fills pages 232-308, with figures 221-295. The existing ice-sheets and glaciers of Greenland, Alaska, the Rocky Mountains, the Alps, Spitzbergen, and other regions, and the striæ and drift deposits of the old continental ice-sheets, are well described, with excellent illustrations from photographs.

The first chapter (pages 1-8) of the second volume, consists mainly of a very full statement of the new Planetesimal Hypothesis, by which Professor Chamberlin shows the probable origin of the earth, and our solar system from a spiral nebula; and Chapter II (pages 82-132) in this volume deals with "The Hypothetical Stages leading up to the Known Eras." The remainder of Volume II gives the Earth History through the Archeozoic, Proterozoic, and Paleozoic eras, to the close of Permian time. In the last twenty pages the evidences of Permian glaciation are presented, and an atmospheric theory is elaborated to account for the ice accumulations of both the Permian and Pleistocene periods.

Volume III continues the story of the earth during the Mesozoic and Cenozoic eras, the latter comprising the Eocene, Miocene, Pliocene, Pleistocene, and Present period. For the last two the synonyms, Glacial and Human periods, are also used. Chapter xix (pages 327-516), treating of the Pleistocene or Glacial period, has 108 figures in the text, in-

cluding several detailed maps. The ice-sheets, their striæ, till, moraines, drumlins, eskers, kames, overwash plains, valley drift, and glacially dammed lakes, are admirably described and discussed, especially for their development in the northern United States and southern Canada.

At the end of this chapter, fifteen pages relate to "Man in the Glacial Period." The authors doubt that man existed in America before the end of the Ice age; but the evidence in southern and central Europe is regarded as conclusive for the presence of primitive man during the later part of the Glacial period. No detailed descriptions are given for the localities thought by many to yield good evidences of man, contemporaneous with the closing stage of glaciation, as in the Delaware valley, in Ohio, at Little Falls in Minnesota, and at Lansing, Kansas; but references in a bibliographic foot-note cite the chief authors and papers bearing on this subject. Anthropologists will regret that these localities, and the question of man's presence here in the Ice age, are not treated more definitely, and that the antiquity of man is left with no attempt for a careful and approximate estimate.

Chapter xx, on the Human or Present Period, fills 27 pages. The authors suggest 20,000 to 60,000 years as the duration since the climax of the Late Wisconsin stage of glaciation, and think that probably half as long time has passed since the beginning of the erosion of the gorges below the falls of Niagara and St. Anthony.

They suppose that the culmination of the Ice age, in the Kansas stage, was somewhere between 300,000 and 1,000,000 years ago, and that the beginning of the Pleistocene glaciation was much longer ago. From such very high estimates of the time occupied in this latest completed period of geology, and also from the long estimates of Post-glacial time, the present reviewer dissents, as stated in my work on the Glacial Lake Agassiz, and in numerous other publications.

WARREN UPHAM.

THE CABIN ON THE PRAIRIE, by Dr. C. H. Pearson (author of "Scenes in the West"). Illustrated. Boston; Lothrop, Lee & Shepard Co.

THE YOUNG PIONEER OF THE NORTHWEST, by Dr. C. H. Pearson (author of "The Cabin on the Prairie"). Illustrated. Boston; Lothrop, Lee & Shepard Co.

These books carry us back to the days when the Indians were numerous on the prairies of Minnesota and the plains farther west. The Indian massacre which occurred during the early days of the War of the Rebellion created a great deal of excitement, especially to the west. Fortunately, the garrison near St. Paul was able to subdue the outbreak. The ring-leaders were sent to prison, and the rest of the Indians were intimidated and kept the peace during the remainder of the war. The author of "The Cabin on the Prairie" is a doctor, who is still living, and has remembrance fresh in mind. It is an exceedingly interesting book, and one which shows the trials through which the early settlers passed, and also shows the faith and courage with which they met all their dangers. The book will never grow old. The second book is not so tragic in its character, but it shows the trials through which the pioneers on the prairie endured, at the same time illustrates the home life of those who laid the foundation of society. The third book is also a valuable one, as it describes the scenes which were common in the far west. The Indian fighter who was called Bill Hamilton, was a novel character; this will be seen from the portrait.

THE CLIFF-DWELLERS AND PUEBLOS.

BY

STEPHEN DENISON PEET, PH. D.

Editor of the American Antiquarian. Author of "The Mound-Builders, Their Works and Relics," "Animal Effigies and Emblematic Monuments," "Aboriginal Religions," and other works.

400 Pages, Finely Illustrated.

This book treats of that mysterious people called the Cliff-Dwellers, as allied to the Pueblos, who are supposed to be their survivors. It begins with the description of the Great Plateau and its varied scenery, the Grand Canyon of the Colorado coming in as a very important part. The author has quoted descriptions from the geological reports, which are very graphic, and has made the geographical features prominent. The "age" of the Cliff-Dwellers is also spoken of, and their distinctive peculiarities are brought out. Two or three chapters are given to an account of their discovery: First, by the Spaniards; next, by the early American explorers, and later on by the various expeditions which entered the region.

The descriptions of the Cliff-Houses are very graphic and are illustrated by many plates and small cuts, which present to the eye, the wonderful architecture and the strange situation of these Cliff-Dwellings.

A chapter is given to an account of the distribution of the Cliff-Villages, and another to the traditionary history. This is followed by the description of the various architectural structures, such as the towers, estufas or temples, cliff-houses, store-rooms, balconies, courts, and various apartments. A comparison is drawn between the Cliff-Dwellings and the different kinds of Pueblos which are still standing—some of them in ruins.

A chapter is given to the Cliff-Dwellers' relics; others to their social and domestic life; to their agricultural habits; to the contrivances for irrigating; while the final chapter shows the contrast between the Cliff-Dwellers and the Wild Tribes, which at present occupy the region.

The book covers the whole field, and describes nearly all of the structures that have been discovered, including those in Sonora, in the northern part of Mexico. The customs of the present Pueblo Tribes are also described, especially the Snake Dance, which has become so celebrated, and several cuts are given in illustration. No other book has ever been published which is so comprehensive. It is likely to be the standard work for many years to come.

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DESERT OF SAHARA AND THE GREAT AMERICAN
DESERT COMPARED.

Explorations by Gautier and others in the Desert of Sahara have shown that the desert of Sahara had a large population in the Neolithic period. Gantier's finds include arrow points and axes of polished stone. Even the waste regions were inhabitable until a recent period. Proofs of this are found in thousands of drawings upon the rocks, and in graves in which stone implements and other objects were found. Stones used for grinding, show that agriculture was practiced.

It is carrying on the work of destruction all the time. The means it employs are the sand itself, helped by heat and cold and wind. The variation of temperature by day and night, often eighty or a hundred degrees, causes an expansion and contraction of the rocks so sudden as often to split them asunder as if a quarryman's hammer had done the work. . . . Where this process stops, another begins. Apart from the newly-split fragments, the common aspect of the desert is a surface scattered with stones and pebbles worn as smooth and glossy as if they had lain for ages in the bed of a river. This smoothness is due to the sand, which works upon the broken fragments, rubbing them and wearing them away. . . . Moreover, the sand works not only on detached fragments, but on the permanent rock. The flanks of the cliffs near El Golea are worn and sculptured in some places to a mere lace work of stone. . . . Thus the hills and cliffs themselves yield by degrees to the sand's onset. The Sahara, it must be remembered, wears no covering of vegetation and earth stitched together by innumerable roots of plants and trees to protect it. It is open to all attack."

In some parts of the Sahara—their extent, Mr. Phillipps tells us, is estimated to be about a ninth of its whole area—the sand has already gained complete victory. In these parts, the regions of the dunes, all structural form, represented by rock and stone, has disappeared, has been decomposed into grains of sand. The

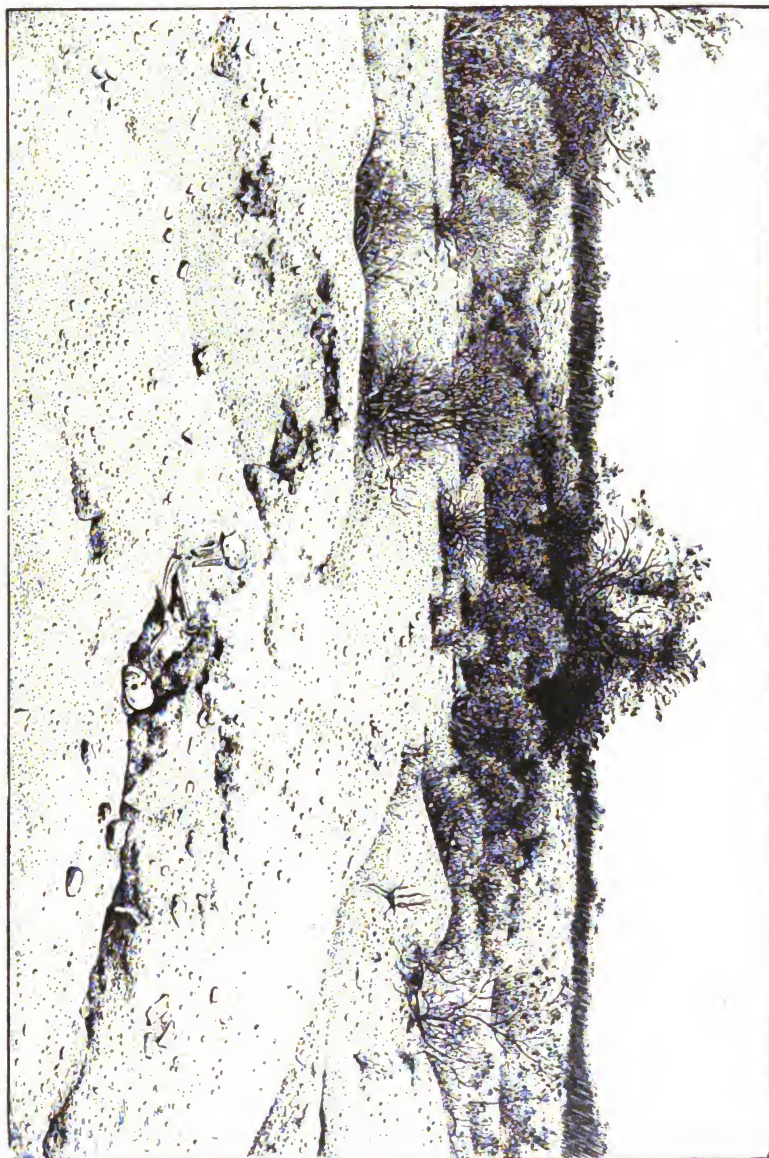
plateaux of tracts of firmer ground stand out, like islands, from the sea of sand—and even the sand gains upon them. The author thus sums up the *raison d'être* of the Sahara:

"In all this the object of the desert is clear enough. Its one endeavor is the destruction, blotting out, and utter decomposition of all organic forms. Every tiny oasis in the desert has to fight for its life. Each one stands a siege. Water, soil, a handful of palms, give foothold for a little community. Individual property, social obligations, recognized responsibilities and laws, germinate and take root, keeping pace with the growth of plant and tree. But all around, constantly repulsed but constantly renewing the attack, the old blind monster fumbles and feels, like water round a ship, indomitable, persistent, assiduous, hankering to get back its own."

The Great American Desert resembles in some respects the Great Sahara Desert. It abounds with sage brush and stunted vegetation, and yet it has been inhabited by various tribes for centuries. The signs of this prehistoric population are numerous. Among these are the remains of various houses, and the tools and domestic utensils which were used. Like the Desert of Sahara, it is subject to windstorms, which carry the sand from the surface where there has been vegetation, and gathers it into heaps. It is like a dead sea, in which the waves have become, in a measure, petrified, or at least so shaped that they resemble waves which have been transformed into solid lines. Pottery vessels and other relics are scattered over the sand waste near regions which were formerly inhabited, and from which the people had removed, leaving no other signs or habitation. Besides these, there can occasionally be seen the bodies or skeletons of human beings, half hidden in the sands, while great open seams in the soil suggest the idea that an earthquake had broken the surface, and thrown the bodies out of their burial place. The vessels are suggestive of the domestic life that once prevailed, but the great sand heaps, stunted vegetation and scattered shrubbery, show that it was always an inhospitable region, and is now left as a desert.

The schemes for irrigation on a large scale are, however, likely to develop the resources of the country, and make "the desert blossom as the rose." It is a remarkable fact that Coronado traversed this region before it was known to any of the whites who had settled upon the Atlantic coast. He even crossed the mountains and entered into the prairie regions which were then used by so many buffalo, and was occupied by the hunter who dwelt by the waters that flow into the Mississippi. The birds have disappeared, as well as the Indians, who formerly lived there. The Spaniards who first settled the regions between the mountains and established their missions among the

SIGNS OF EARTHQUAKE.



Pueblo tribes, have also disappeared. The soil itself, that has always been considered so barren, is proving, under the irrigation process, very productive. The mystery that has heretofore surrounded the Cliff Dwellers and Pueblo tribes, is dispelled, for the soil, which has seemed so barren, even with the imperfect means of cultivation employed by the prehistoric inhabitants, was so productive that it needed only to have the water turned upon it by the unskillful hands of the tribes, to yield an abundant harvest.

There were pictures of the Great American desert given during the days of early explorations. Cabeza de Vaca was, perhaps, the first white man to look upon the waste. The second was Cortez, who was aroused by the description of Cabeza de Vaca, and led his army on the famous expedition to the region of the Pueblos, and then to the prairies east of them. Later on, various adventurers reached the same region. Among them was the famous traveler, Gregg, who wrote "The Commerce of the Prairies."

General Simpson, in 1849, made a military reconnoissance from Santa Fe to the Navajo country, and published a description of the Pueblo tribes and their remarkable houses in which they dwelt. He was the first one to draw the attention of the American public to the Pueblos and their peculiar mode of life.

Col. Marcy, assisted by Geo. B. McClellan, in 1852, led an army up the Red river of Louisiana, and made a report. This report contains a description of the buffalo herds, and the Indian tribes which dwelt there. The tribes which were mentioned, were as follows: The Comanches, who subsisted only upon Buffalo, and are known as the Buffalo Eaters. Col. Marcy says the Nomadic Indians, as far as the boundless plains, over which he roams, neither knows or wants any luxuries, beyond what he finds in the buffalo, or deer around him. They serve him with food, clothing, and a covering for his lodge. He sighs not for the titles or distinctions that occupy the thoughts of the civilized man. He cares only to be able to cope successfully with his enemy in war, and in managing his steed with unfailing adroitness. He is in the saddle from boyhood to old age; his favorite horse is his constant companion. It is when mounted that the Comanche exhibits himself to the best advantage; there he is at home, and his skill is shown in the manoeuvres which he makes in battle, such as throwing himself entirely upon one side of his horse, and discharging his arrow with great rapidity on the opposite side, from beneath the animal's neck, while he is at full speed. This is truly astonishing. Every warrior has his own horse, which is the fleetest that can be obtained. The prairie warrior performs no manual labor; his only occupation is the war and the chase. He follows the chase: he eats and sleeps, smokes

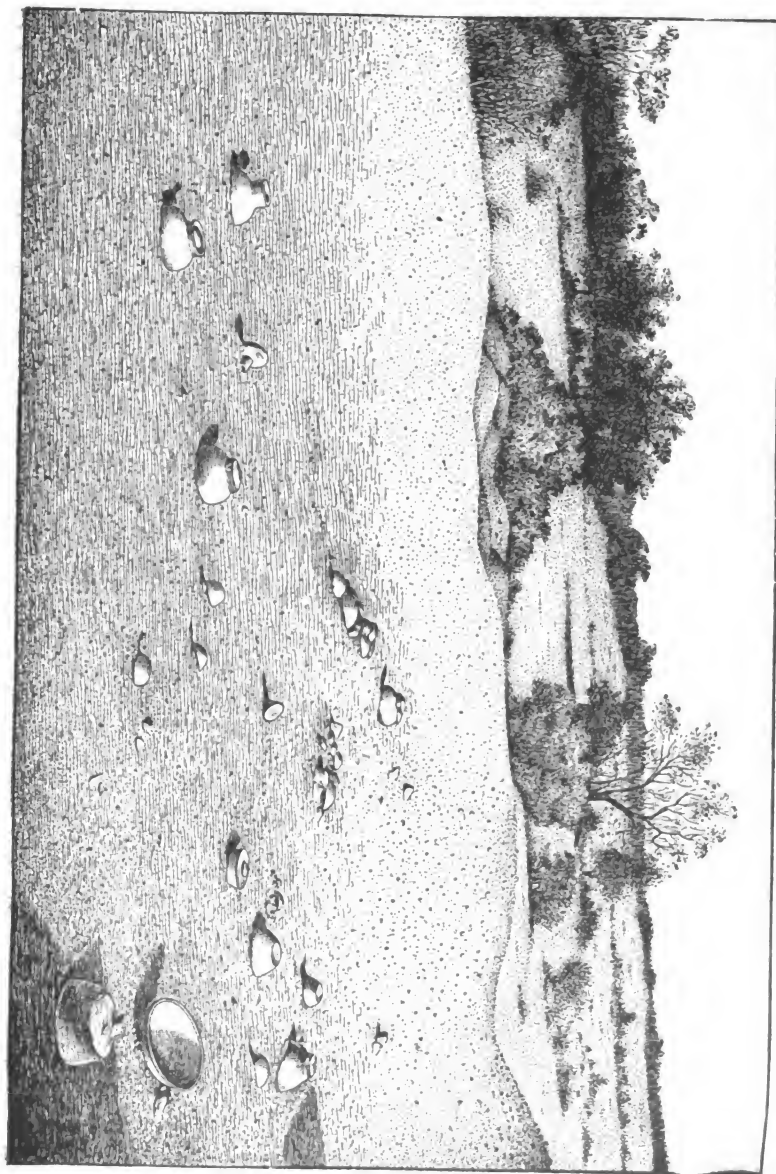
his pipe, and thus he passes his time, and in his own estimation, he is the most lordly and independent sovereign in the universe. The Arabs of the desert, the Tartar tribes and the aboriginal occupants of the prairies, are alike wanderers, having no permanent abiding places, transporting their lodges wherever they go, and where they are pitched they are at home. Their government is patriarchal, and guided by fraternal councils. They are insensible to the wants and comforts of civilization. The resemblance between the Arabs and these Plains Indians is very striking. They are alike the most expert horsemen in the world, and possess the same fond attachment for their animals. In their political and domestic relation, they are also similar to the old world nomads. They are governed by a chief, the term of whose office is hereditary. He leads them to war and presides at their deliberations and councils. Their laws are such as are adapted to their peculiar situation. Their execution is in their subordinate chiefs and captains, as they are called, and they are rigidly enforced. They were perhaps as errant free-booters as can be found upon the face of the earth. Forays were often attended with much toil and danger. They were called "war expeditions," but it not infrequently happens that six or eight men set out upon one of these adventures. The only outfit they needed was a horse with war equipment, with bows and arrows, and possibly a gun. Thus prepared, they set out on a journey sometimes a thousand miles or more, depending for subsistence upon such game as they may chance to find. The use of the bow, which is the favorite and constant defense of the prairie Indian, and which he makes use of in hunting the buffalo, is taught the boys at a very early age, and renders them, when grown up to manhood, successful in war, as well as in the chase. The bows are made of tough, elastic wood, of the osage orange, strengthened and reinforced with the sinew of the deer, wrapped firmly around it. The bow is made strong with a cord of sinew. They are not more than one-half the length of the old English long bow, which was said to have been sixteen hands, "breadth and length." The arrows are twenty inches long, with a point of iron at one end, and two feathers, intersecting each other at right angles at the opposite extremity. At short distances, the bow, in the hands of the Indians, is effective, and frequently throws the arrow entirely through the huge carcass of the buffalo. In using this instrument, the Indian warrior protects himself from missives of his enemy with a shield of circular form, covered with two thicknesses of hard, undressed buffalo hide, separated by the space of about an inch, which is stuffed with hair; this is fastened to the left arm by two bands in such a manner as not to interfere with the free use of the hand, and offers such resistance that a rifle-ball will not penetrate it unless it strikes it perpendicular to the surface. They

also make use of a war club, made by bending a wythe around a hard stone of about two pounds weight, which has been previously prepared with a groove, in which the wythe fits, and is hereby prevented from slipping off. The handle is about fourteen inches long, and bound with buffalo hide.

The Comanche men are about the medium stature, with coppered colored complexion, and intelligent countenances, in many instances with aqueline noses, thin lips, black eyes and hair, with but little beard. They never cut their hair, but wear it of very great length, and ornament it upon state occasions, with silver beads. Their dress consists of leggins and moccasins, with a cloth wrapped around the loins. The body is generally naked, above the middle, except when covered with the buffalo robe, which is a constant appendage to this wardrobe. The women are short, with crooked legs, and are obliged to crop their hair. They wear, in addition to the leggins and moccasins, a skirt of dressed deer skin. They also tattoo their faces and breasts, and are far from being as good looking as the men. There was a striking similarity between the Plains Indians and the Arabs and Tartars who wandered over the steppes of the interior, but we are astonished at the dissimilarity between them and the aboriginal tribes, who formerly dwelt in the Mississippi Valley. The latter, from the time of the discovery of the country, lived in permanent villages, cultivated fields of corn, and possessed strong attachment for the ancestral abodes and sepulchres. They had no horses, but made their war expeditions on foot, and sought the cover of trees when going into battle. The Plains Indians had no permanent abiding places; they never cultivated the soil; they were always mounted, and never fought a battle, except on the open plain. They charge solidly up to an enemy, discharge their arrows with great rapidity, and are away before their panic-stricken antagonist can resist. In their treatment of their prisoners of war, there was also a marked difference. The eastern tribes, although they put their prisoners to torture of very appalling character, seldom, if ever, violated the chastity of the females, while on the contrary, the Prairie Indians seldom put their prisoners to death by long torture, invariably compelled the females to submit to their lewd embraces.

This comparison between the desert of the eastern continent and the vast plains of the western, and the tribes which inhabited them, is interesting, because it shows the influence of environment. It appears as if the law of heredity was not as strong as the influence of surroundings. We cannot trace any connecting links between the lineage of these tribes of Western Indians, and those who roamed over Asia, nor can we say that there are any inherited traits which come from the people of the old world; and

POTTERY IN THE DESERT.



yet, the resemblance of the tribes who dwelt in this continent and the great deserts of the eastern continent, is very marked.

In connection with this desert and its inhabitants, it may be well to speak of the delta of the Colorado and adjacent regions, which is called the Nile of America. Between the deserts of the West and East this delta pans out against the Cucupa mountains into unknown regions. It is occupied by the Guma Indians, but has been very rarely visited by explorers. In 1828 the Pattie party descended the river and dug out canoes, crossing a plain, deep with sand, they threaded their way through cactus to the missions of Santa Catalina. According to Indian traditions, the Great Basin had been filled to the brim in times past, and people lived along its margin in many villages, but the floods receded until a desert remained. Coronado, in 1540, crossed this region, and he descended the river to the mouth, and estimated that 15,000 Indians were living in the eastern part of the desert, but to-day the population does not exceed 300. To-day hundreds of square miles or sandy plains, strewn with fragments of coarse red pottery and the prehistoric trails, consist of relics of the vanished hordes. Along the eastern slope of the Cucupa mountains were untold cycles. This trail must have been one of the most traveled of the South-west, since it leads from the interior deserts and mountains to the wild rice fields and fishing grounds at the head of the Gulf, and was doubtless an inter-tribal highway. A movement has begun into this desert, which will make the alluvial lands the home of many thousands, as the project for immigration promises to convert the delta, and it is supposed that in a comparatively brief period the agricultural aspect of the entire area will approach that of the Nile. The survey of the Death Valley in Nevada has brought up some new information concerning the depth of this valley below the sea level, as well as some interesting facts about the Ralston desert.

The recent earthquake shocks in New Mexico give emphasis to the scene presented by the plates. The impression, formed by the skeleton seen in one of them, is that the earth was opened here and the skeletons were exposed.

MYTHOLOGY OF THE PLAINS INDIANS.

IV. MAGICAL ANIMALS.

In our present article it is proposed to deal with the ideas entertained by the Indians as to the members of the animal kingdom with which they came into contact and the magical powers they are said to possess. The exercise of such powers is not limited to any particular class of animals, birds and beasts of various kinds being accredited with them. But not all animals were thus endowed; as appears from the Arikara* story, entitled "The Medicine Dance of the Beaver, Turtle, and Witch-Woman." Here the animals meet in a lodge to have sleight-of-hand performances, but they were limited to the "medicine animals" and "the birds who had magic power." It was decided, moreover, that only the leading animals should perform. These were the Beaver, the soft-shell Turtle, and the old Witch-Woman, who is thus classed with animals, unless it be said, as it may be with equal truth, that animals are thus classed with human beings.

In the legends of the Plains Indians the Beaver and the Turtle by no means take the place among the magical animals that the feats ascribed to them in the Arikara story just referred to might lead us to expect. The Beaver gnaws the posts of the lodge until it appears about to fall, and when the animals are scared and beg it to stop it repairs the posts again and says: "This was only sleight-of-hand. It is not real." The Turtle tries to outdo the Beaver, and after singing a magic verse, sticks a knife close to his left collar-bone. Water begins to pour forth from the cut and runs out until there is water all over the lodge. When the people are afraid the Turtle inhales and draws all the water back into himself. These, however, are special feats, which require only an extension of the natural gift of the animals in performing them. The Beaver occupies an important position among some other tribes, but with the Plains Indians other animals have precedence. Probably the most important of all may be known from the story of the "Contest between the Bear and the Bull Societies," current among the Arikara.

According to this story, a young man in the Bear family obtained leave to challenge the Buffalo to fight. The leader of the Buffalo family objected to the challenge as something unusual, saying, that "although they had always shown their power to the people, this hidden mystery of having power of the animals would have to be given to the two fighters." He finally gave his consent, however, and the Bear man and his Buffalo opponent were prepared for the contest by means of paint and the greatest medicines possessed

* Traditions of the Arikara. By George A. Dorsey. Carnegie Institution, Washington. (1904.)

by their respective societies. After the singing of the medicine songs of the opposing parties, and a little preliminary acting, the Buffalo made a sudden rush at the Bear, who was "sitting around trying to get a chance at the Buffalo," and hooked him again and again until the Bear man was dead. The superiority of the Buffalo would seem from this to have been established. But the Caddo* have a story of a contest between the Buffalo and the Bear to try their prowess which ends somewhat differently. During the time that animals spoke many languages, Bear and Buffalo meet and tell each other of the powers they had received from the Father. Both claimed to have been like human beings before they assumed animal forms. Bear then asked Buffalo to show "just what he did when he was very angry or when he wanted to hurt or kill any one." Buffalo thereupon began to throw up the earth and strike the ground with his horns. Bear sat watching him, and before he knew what had happened, he was falling to the ground and Buffalo was again coming at him. When Bear had fallen a second time Buffalo asked how he used his powers. After Bear had gone through his movement, he grabbed hold of a small tree and cut it down with his sharp teeth. Then, "before Buffalo knew what had happened Bear was upon him and he was trying to get up from the ground, but Bear held him down until he was ready to give up." Finally Bear let Buffalo get up, saying, "That is the way I do when I get very angry, but I would treat you worse than that if I wanted to kill you." Here the Bear and the Buffalo appear to be on an equality, but the latter is much more frequently than the former referred to in the legends of the Plains Indians, and, owing probably to the unique place it had in the economy of native life, it evidently occupies a position of superiority. The Buffalo lived in large bands, forming communities governed by the old bulls, among whom was a chief. These communities are represented in the stories of the Arapaho and other tribes, as leading a similar kind of life to that of the Indians themselves, both family and social. They are spoken of as having tipis, and their games and other recreations are said to have been the same as those of men. In the Arapaho story of *Splinter-Foot-Girl*,* the Buffalo sit in horseshoe form while having a game of big-wheel. In the tale of "Blue-Feather, Buffalo Woman and Elk Woman," a man marries a buffalo woman, that is, a female buffalo in human form. She goes away with her son, as buffalo cow and calf, and the man follows their trail until he comes to a tipi where lives the father of his wife, the chief buffalo bull of the herd. He claims his son, but is not allowed to take the child away unless he is victor in certain contests. The man has to pick out his boy (calf) from among the calves, all of whom are alike in color and size. Then he has to dance with the buffalo four nights and four days. Afterwards he has to run a race with the buffalo, and finally

* Traditions of the Caddo. By George A. Dorsey. Carnegie Institution. (1905.)

* Traditions of the Arapaho. By George A. Dorsey and Alfred L. Kroeber. Field Columbian Museum. (1903.)

he has to keep awake four days and nights while the buffalo in turn tell "myths, tales and stories." By the aid of his buffalo son the man is successful in each case but the last, and falling asleep through weariness, he is trampled to dust by the buffalo. In a similar story, where the man is called Blue-Bird, the so-called myths are told by an old man (buffalo), and they relate to the food and water the buffalo eat and drink, the country they go to and what they see, how they sleep at night and what they do when they awake. The commanding position occupied by the buffalo is well shown by the Arapaho story of Foot-Stuck-Child, whom Buffalo Bone-Bull proposes to marry. He sends the magpie to obtain the consent of the girl's protectors. At first they refuse, but finally, as "the bull was very powerful and hard to overcome or escape from," they consent and send the girl to the bull with many presents designed to stand for various organs of the body. In this story and several others, in which buffalo have acquired human wives, the women are taken away again from their animal husbands. But this can be effected only through the aid of ground traveling animals, such as the mole, the gopher and the badger. Other animals cannot get the woman, as the bull always sees them and frightens them away.

Indian stories give the buffalo greater mental power than man, at all events they are supposed to have much greater knowledge of things and of nature than man possesses. The buffalo is, indeed, credited with revealing to man what he was previously ignorant of, particularly things connected with the ceremonial lodges. In the Arapaho story of "The Origin of the Buffalo Lodge and the Sacred Bundle," a hunter, living alone with his wife and children, is unsuccessful in his pursuit of game. One day he sees a buffalo cow grazing and manages to get near it, but before he can shoot it turns round and speaks to him. The buffalo tells him that she has come to reveal things which he is to observe hereafter. In accordance with her instructions, the man makes many arrows and then takes a good rest. While he is asleep the buffalo cow reveals things to him, and also sends to the neighborhood of his lodge a great herd of buffalo. Having now plenty of meat, the man starts off in search of the camp to let the people know where they can find food. They follow him and when they are encamped he tells them his story. Then a Buffalo-lodge is erected by his wife for the benefit of the people, who at that time were ignorant of things and without tribal law. The man "then gave the old people wisdom and knowledge of the various natural laws. He gave them certain degrees with the right to conduct ceremonial dances . . . for the blessing of the people, for the increase of the race, and for an abundance of food." Then the man pledged himself for an Old-Men's Lodge, but required that a sacred bag, which had been revealed to him, should be made. It consisted of bears' claws, buffalo horns, rattles, buffalo tails, paint, tallow (incense) and stones. In another Arapaho story the origin of several other Lodges is ascribed to a buffalo cow, although in that entitled "The Flood and Origin of the Ceremonial

Lodges" they are accredited, with much detail, to Nihancan, as the creator. This is a curious fact, considering the evil character usually ascribed to Nihancan, and strangely enough the agent for carrying out his instructions is a man who has committed murder. Apparently the act was intended for a propitiation. The murderer shoots at the buffalo cow, although without effect, in this story, which apparently is made up of separate tales strung together, but modified to suit a particular view as to the attributes of Nihancan.

Not only do the Indian legends ascribe superior knowledge to the buffalo, but they give them remarkable powers. This is seen in their ability to transform themselves into human beings and back again. In the Caddo story of "Buffalo Women"* this power is exercised repeatedly, by the simple process of twice rolling over on the ground. In the same way, the human husband of the buffalo woman becomes himself a buffalo, afterwards resuming his human form. A boy is born to the marriage of this pair while living with the husband's people, but he becomes a buffalo when rolling in play and finally he and his mother go away as buffalo to her people. The Caddo have a story about Coyote undergoing this transformation through being thrown up into the air by Buffalo, who told him that he could become a coyote again by rolling over two or three times in a buffalo wallow. This power was good, however, only for seven times, and Coyote was so proud of possessing it that he soon had changed his form six times, finally being a buffalo. He then met a famous coyote and asked him if he would not like to become a buffalo. He assented but when Coyote-Buffalo attempts to effect the transformation the only result is that he himself again becomes a coyote.

Another power possessed by Buffalo is referred to in the Arapaho story relating to "The Origin of the Buffalo Lodge." Here a young woman is attracted by a buffalo steer, who afterwards appears as a young man and induces her to go away with him. They come to a creek where they find the steer's father, Scabby Bull,* who agrees to produce some things for his daughter-in-law's use. He tells her to close her eyes and not to look, and then he vomits out "a nice well-fringed buckskin dress, with copper pendants, a pair of leggings and moccasins nicely made, a beautiful robe well quilted and ornamented with pendants, a gorgeous belt covered with round plates, and many other articles of wearing apparel." The young woman dresses in these things and goes on with her husband, who had resumed his form of a steer. They reach the buffalo camp circle and the question arises what is the woman to eat. It is settled by the clubbing of a male calf, which she eats. From another story, "The Porcupine and the Woman who Climbed

* Traditions of the Caddo. By George A. Dorsey. Carnegie Institution. (1905.)

* Scabby-Bell appears in the traditions of the Skidi Pawnee as a "Wonderful Medicine-Man." His animal origin is shown by the statement that, "although he could do many wonderful things, he was like a real animal."

to the Sky,¹ it appears that when the bones of the calf were covered with its hide, it came to life again; so that one calf would supply food for a lifetime!

It appears from their legends, that the Plains Indians believed the buffalo to have been formerly eaters of human flesh. How they came to give up this habit is related in the Porcupine and Woman story just referred to. The Porcupine is the moon who, as a young man, has married a buffalo woman and followed her to her father's camp. Here he has to have his face covered with a blanket whenever he enters the tipi. His father-in-law performs the miracle of providing subsistence for all the buffalo people, and the food is human flesh. Moon hears of this, and one day during the ceremony he sneaks out of the tipi and sees his father-in-law go to a black snag, the people standing near in two long rows, and strike it with a red digging stick. A human being comes out of the snag and runs swiftly between the rows of people. Many other humans follow and they are all slaughtered and taken to the camp for use. The first one returning into the snag. Moon manages by stratagem to obtain bows and arrows, and then requests permission to perform the miracle. He is allowed to do so, and after all the other human beings have come out of the snag he strikes down the "cut-nose" woman who had been the first to come out and had "ruined the human race" before she could get back into the snag. The others are saved and Moon distributes bows and arrows among them, with which they are able to subdue the buffalo.

In an Arikara story, Cut-Nose appears as a Water-Monster, "which looked like a buffalo, for it had horns," and he led the buffalo in their attacks on human beings. In the longest form of the legend which relates "Why the Buffalo no longer eat People,"* the buffalo are spoken of as being human, but as having horns and tails. They perform a ritual before striking the hollow tree from which the people come, led by Cut-Nose, who is spoken of as a man. The people are killed, Cut-Nose returning to the tree, but on one occasion a boy escapes and hides himself in a deep ravine. He is afterwards concealed by the daughter of the chief Buffalo in her father's tipi. She has learned how the boy's people can be saved and she instructs him to make many bows and arrows, which they place near the hollow tree the night before the ceremony for bringing out the people was to take place. As they came out the boy gives them the weapons and tells them to kill the Buffalo. The latter run away and become real buffalo, and the people become part of the Arikara. The overpowering of the Buffalo by man is attended with important results. Instead of the Buffalo eating men, men are now to eat the Buffalo. Moreover, according to the Arapaho story, the Buffalo are to undergo physical changes. Their speed is to be reduced and their bodies are to be made up of various objects. This curious notion appears in several Arapaho tales, and particularly in that of "Blue-Feather and Lone-Bull," who after his defeat sends

* Traditions of the Arikara. By George A. Dorsey. (No. 13.)

word to the victor, "that hereafter we shall be harmless to his fellowmen; that our flesh shall be his subsistence hereafter; we shall roam on broad prairies, among the hills and mountains; that we shall protect ourselves by hearing and by smell of his approach to kill us, and run away. But wherever we may go, either at night or by day, we will carry our heads downward, and if there should be any murderer in the party after us, we shall be out of his reach. You may know that in order to remedy this the murderer is to eat a piece of human flesh; then we shall be at close range!" The murderer is, thus, to do what the Buffalo is supposed to have originally done, and possibly their great magical power may have been connected, in the native mind, with the eating of human flesh.

As soon as man established his superiority over the Buffalo, he used his magical power to bring them near when he was in want of food. In some of the Indian stories, however, as in that which relates the "Origin of the Buffalo Lodge and Sacred Bundle," according to Arapaho idea, a Buffalo itself sends great herds of Buffalo for a particular individual. In another story the gift of the Buffalo is connected with the establishment of the ceremonial lodges. A young Buffalo bull comes from the east toward a man living in a tent standing alone. The man heads it off, and the Buffalo then says: "Let me go to your tent. I have come to give you the Buffalo. I give you myself. I have come to tell you of the life you will have, which will consist in the lodges (dances)"—enumerating them. Then, "the Buffalo came from the four directions, and scattered in herds and could be seen over the land." But usually man attracts the Buffalo by the exercise of some magical influence. When a poor boy wishes, as in the Arapaho story of "Found in Grass" (141), to marry the chief's daughter, he gives out that he is going to look for Buffalo, or, as in another form of the same story, "to make Buffalo." This he does, and there is a great slaughter of the animals, the people thus obtaining the food which they have long been in need of. In "Found in Grass" (139, 141), the buffalo are caused to come from a lot of buffalo chips, arrayed in the form of a corral in the one case, and in the other placed in a heap. In "Found in Grass" (140), the hero uses a magical wheel to obtain the buffalo. He makes a small running wheel representing animals and, throwing it on the ground to revolve, he hits it with an arrow stick.* Where the wheel stopped and lay on its side there was a dead buffalo steer. Afterwards by running his wheel, he caused buffalo to come from all directions into a corral prepared for them, and they were then driven over a high precipice. This may have been the original mode in which the buffalo were killed by the Indians.

It might be inferred from the stories in general, that the buffalo always existed in localities not far from the abodes of the Indians even from the earliest times, and long before man was able to utilize

* See THE AMERICAN ANTIQUARIAN, Vol. XXVII, No. 6 (1905), for the origin of the ring and javelin game, according to the Wichita and Skidi-Pawnee.

the animal for food. And yet there are tales which seem to show that the buffalo belonged to another land. Thus, in the Arapaho story of "The Man who became a Water-Monster," some young men follow buffalo tracks which lead to a cave in a mountain. They enter the cave and find a passage through the mountain. They cross a running stream and then see a light at the other end. Emerging from the passage, they discover herds of buffalo scattered everywhere, "standing in the prairie, along the streams and by the rivers—a true buffalo land." In "The White Crow," the existence of the buffalo beyond a mountain is again supposed, but the White Crow owned them all and has them enclosed. The people are playing with the sacred arrows and the sacred wheel, and a young man wearing a white robe and having a quiver on his back comes to see the game. They find that he is the White Crow and they watch to see where he goes. Through stratagem and the aid of a buffalo cow they catch the crow and tie him to the top of the tent where the smoke comes out and the gradually turns black. Then they let him go, and two young men follow his course and find his tent. They tell the people, who come and eat his meat. On going home they leave a small dog behind, which becomes the pet of Crow's little boy. Then the people go back and ask Crow where the buffalo live and he takes them to an immense rock with something like a door. When Crow opens the door the small dog runs in, begins to bark, turns into a large dog and drives the buffalo about. They run through the door and scatter to the south and to the north.*

As to the original place of abode of the buffalo, it is said in one form of "The Porcupine and the Woman who Climbs to the Sky" story, current among the Arapaho, that there were many buffalo in the country about to which Moon (Porcupine) took the woman; as "the father, mother and sons had taken the buffalo up with them from the earth," when the people were starving. The sons were Sun and Moon, and probably the sky was originally considered as much the home of the buffalo as of the two heavenly bodies. Possibly, however, the sky may stand for the north, where, according to the mythology of the Skiddy-Pawnee, the buffalo had its home. In the legend of "The Boy and the Snowbird," the hero is taken by the Wind to a strange land in the north, where Wind "is always ready to send wind in order to drive the buffalo to the people." In the legend of "How the Buffalo went South," the Pawnee belief is elaborated, and an account of the incidents there described will form a fitting conclusion to the present article. The legend begins by stating, that, "at the creation of all things, Tirawa made a buffalo to stand in the north, which was to be the home of the buffalo. The buffalo was given a mate. Here they increased so that when the

* In the Wichita story of "The Coyote and the Buffalo," the dog who discovers the place of the buffalo is Coyote, who thus transformed himself to deceive Raven, who kept the buffalo inside a large hill. "The Mythology of the Wichita," by George

buffalo became old, it was given a place to stand, at the north entrance, where the heavens touch the earth, where it was to let pass in and out whoever Tirawa wished to send out and call in. For many years the buffalo was standing at this place, and each year it would drop off one of its hairs, so that when all the hair had dropped off from it, the world should come to an end. This buffalo was the father of all buffalo. In course of time, the descendants of the chief buffalo became so numerous, that they needed more grass and wished to go south. This they could not do without the consent of Spider-Dorran, who was stationed in the center of the earth, and had placed cobwebs all around. She had also planted many seeds given to her by Sun and Moon, and had much tobacco. Chief Buffalo sent several expeditions under his sons to obtain tobacco from Spider-Dorran, and to get her consent for the buffalo to go south. They were always unsuccessful, however, so finally the buffalo were ordered to make a rush and trample down Spider-Dorran and all her possessions. This they did, and Spider-Dorran was trampled into the ground and turned into a root, and in time, a vine grew up from her, so that when the people saw it they said: "Why, this is the vine that used to be the cobwebs of Spider-Dorran, who used to be seated in the center of the earth." So some people digged it, and they found that Spider-Dorran had turned into a large root—"it had legs, head, and shoulders—so it makes squash medicine." The buffalo, after they had trampled everything into the ground, went south, and spread throughout the country.

C. STANILAND WAHE.

BIRTH PLACE OF BUDDHA.

Far away on the border of Nepal, the home of Gautama Buddha has been discovered. Buddha lived about 500 B. C., and was the son of the Raja of Kapilavastu. A pillar, inscribed by the Emperor Asoka in the third century B. C., marks the city's site. The ruins are all of brick, and are covered with jungle, and so extensive that their exploration will require years. The city was destroyed during Buddha's lifetime. It was a mass of ruins in A. D. 410, when the first Buddhist Chinese pilgrim made his way there.

The buildings that are now being excavated are older than anything known in India heretofore. The Lumbini Garden, the traditional birthplace of Buddha, has also been discovered. It is also marked by one of Asoka's pillars, with a perfect inscription. This stands in Napelese territory, five miles from the British frontier. In a brick tumulus close to the British frontier, have been found relics of Buddha himself.

COPPER RELICS AMONG THE MOUNDS.

BY STEPHEN D. PEET.

In a previous number, we have treated of the copper age in America, and there showed, that the copper was distributed throughout the continent, and was so common as to give rise to the opinion that the copper age prevailed here. We shall devote this chapter to a similar subject, viz.: The use of copper among the Mound Builders. The position which we take is, that the copper relics are found in the mounds, in sufficient numbers to prove that the Mound Builders were actually in the copper age, rather than in the stone age, and that copper is an index of the stage of progress which had been reached by them.

It has been generally held that all the tribes of America were in the stone age, and that they were all to be classified under the same head, and as having all reached the same stage of progress. This, however, is a mistake, for there was a great difference between the tribes which existed on the continent at the time of the Discovery; as great a difference as existed in the prehistoric people of Europe during the different ages, the rude stone, the polished stone and the bronze.

The term "stone age," has been generally regarded as one, which could be applied to all the tribes of America, and has been used as an index to the social status, which prevailed during the prehistoric, as well as the proto-historic period. This, however, is a mistake and is misleading, for we certainly cannot place, either the Eskimos of the far north, or the wild hunter tribes of the Canadian provinces, on the same level with the mound-building tribes of the Gulf states, or the partially civilized tribes of Mexico, Central America, or Peru, and those who do so, take an erroneous position. We maintain, that while the chronological horizons which have been recognized in Europe are lacking in America, yet the geographical and ethnographical differences are fully equal to those which have been recognized in Europe as stretching from the time of the Cave Dwellers, to the time when the rude stone monuments were erected.

We do not deny that there were tribes of Indians in the Mississippi Valley who resemble those which were in the Canadian provinces, in many respects, yet the difference between the Mound Builders and these tribes was fully equal to that which, on other continents, has led to the recognition of the different "ages."

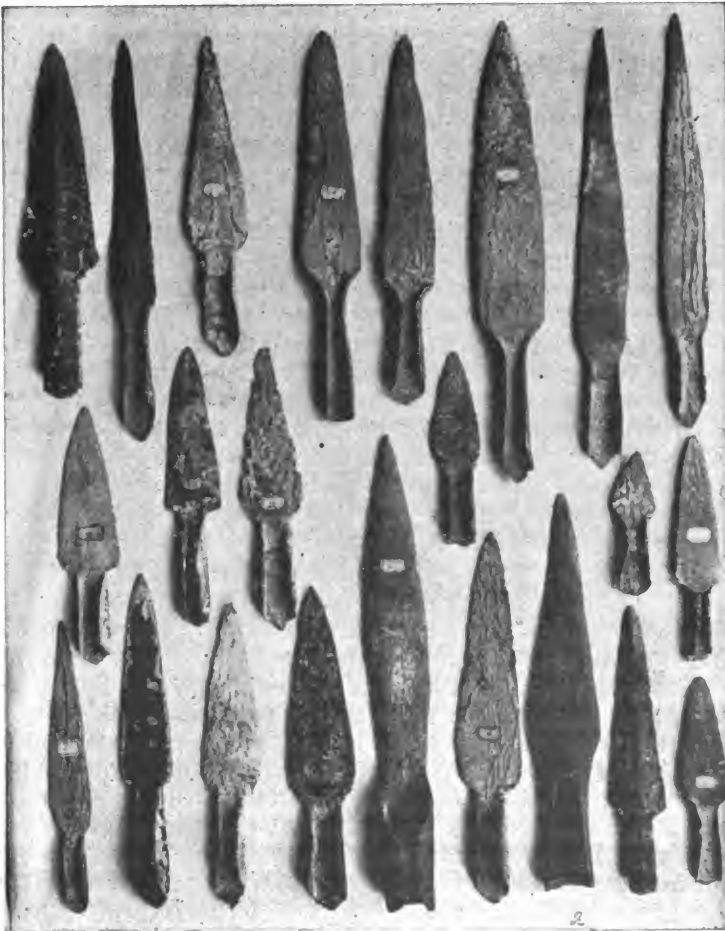
It is true that the majority of the Indian tribes, which dwelt

in the Mound Builders' territory, had copper in their possession, and may be said to have been in the copper age, and the difference between them and the tribes farther north is sufficient to prove that both the stone age and the copper age prevailed on the continent at the same time, but the Mound Builders represented the copper age, and the northern tribes the stone age.

I. In evidence of this point, we shall first speak of the character, of the copper implements and ornaments which were found among the tribes of the Mississippi Valley, at the time of the Discovery. We have already shown that copper was in common use among these tribes, but it was because of the discovery of gold, that it was, to a certain degree, overlooked, or at least not made as prominent as it should have been; but by reading between the lines, we shall find that it was the copper age, rather than the stone age, which prevailed. We acknowledge that there were tribes of Indians north of the chain of the Great Lakes who made little use of copper, but the majority of the tribes which were found, in what is now the United States, including those on the northwest coast, had copper in their possession, and may be regarded as having been in the copper age. This was especially true of the tribes in the Gulf states, and those situated along the Atlantic coast, and especially is this true of the tribes formerly dwelling in Wisconsin. It is true that tribes along the Atlantic coast varied in their social condition from those who were situated in Florida. Some of these tribes were dwelling in permanent villages, and were mainly agriculturists. Others were both agriculturists and hunters, still others were fishermen, but were accustomed to till the soil in a rude way. All of them, however, made use of copper, both as weapons of war, and as personal ornaments, and so could be said to have been in the copper age. On the contrary, those north of the chain of the Great Lakes, were wild Indians, who lived largely by the chase, and were constantly at war with one another, and made very little use of copper.

In confirmation of this, it may be said, that the museum at Toronto, according to the testimony of the custodian, Mr. Boyle, has very few copper relics, as compared with the stone relics. What is more remarkable, the explorers which traversed the regions north of the Great Lakes, seldom speak of copper as prevailing there, notwithstanding the fact that the Hurons and other tribes who dwelt in the Canadian provinces, belonged to the same stock as the Iroquois, and were in many respects similar to the Pequots who dwelt in New England, which tribes all seemed to have had copper in their possession, as many specimens of it have been found in their tombs. Prof. Perkins of Dartmouth College, has described the copper beads found in the graves of New York and Maine, and says that "objects of copper are more numerous in our collection than those of bone and steel." All our

specimens are made of Lake Superior native copper, which was hammered into the desired form. Mr. Moorhead has given two cuts to illustrate these specimens, and other authors have described the copper relics which were found at an early date in the valley of the Connecticut, and other parts of New England.



SPEAR HEADS FROM WISCONSIN.

As evidence of this position, we would refer to the remarkable pamphlet which Mr. Lucien M. Carr has prepared, in which he gives quotations from the writings of a large number of the explorers who became familiar with tribes of Virginia Indians

See Prehistoric Implements, p. 94 and 95, p. 15 and 16.

and other localities at an early date. The following are a few of the facts which he has gleaned from these writings, and has gathered into the pamphlet:

Verrazano, in his explorations along the Atlantic coast, saw many savages with plates of copper which they valued more than gold. They had beads of copper hanging in their ears. De Soto, on the Savannah river, also found a hatchet of copper which was said to have a little mixture of gold. Cartier learned as early as 1535 that the Indians on the St. Lawrence had red copper. Champlain speaks of a piece of copper a foot long. Radisson, in 1658, who was on the shore of Lake Superior, makes mention of copper. Gosnold, in 1602, visited Martha's Vineyard, and says of the Indians there, that they had a great store of copper. Some of them had "chains of copper, made of hollow pieces, each piece as long as one of our reeds, a finger in length." Their collars they wear about their bodies, like bandeliers. They are made of hollow pieces, 400 pieces in a collar. Besides these were pieces of copper, like open blades. "An Indian had hanging about his neck a plate of copper for a breast-plate, about a foot long. The ears of all the rest had pendants of copper." Hendrik Hudson found copper pipes among the Indians near New York City. Mr. Ralph Lane heard of a marvelous mineral called wassador, or copper, which yielded two parts of metal to three parts of ore. Strachey speaks of a chief who wore upon his head a broad sheath of gold, or copper, and none dare trade, "except those that wore a red piece of copper on their head like himself."

Josselyn says: "Prince Phillip had a coat and buskins set thick with beads, and a belt of the same. His countrements were valued at 20 pounds." Captain Smith says that "their mantles did not differ much from those of the Irish. Some were embroidered with white beads, some with copper. Of the sashes, belts, garter, etc., it is not necessary to speak in detail." In the far north they were usually made of skin, more or less ornamented. Along the New England coast, they are made out of blue and white beads and worked out of certain shells. The Indians made a free use of shells and porcupine quills in adorning their garments. The art of making pictures on the living flesh prevailed among the Huron and Iroquois tribes. In New France most are satisfied with a few figures of birds, serpents or other animals of which Charlevoix speaks. The Virginia Indians were accustomed to tatoo certain marks upon their backs. The use of labrets was common. The supply of rings, pendants and articles of different kinds worn in the ears, was particularly unlimited. Carolina they wear great bobs in their ears and sometimes in

See Mass. His. Col., Vol. III., Series 3.

See Lawson's Carolina, pp. 193.

Laflam III., pp. 49.

the holes thereof they put eagle and other birds' feathers for a trophy." It prevailed in New England and New York.

Copper in the shape of beads, pendants or wire, was in use from Canada to Florida.

Strachey says of the Indians of the south: "Their ears they



KNIVES FROM WISCONSIN.

bore with wide holes, commonly two or three. In the same they do hang chains of pearls and bracelets of white bone or copper."

In addition to the articles noted above, there are others, such as necklaces and gorgets, made of bone, pearl, shell and copper.

See Strachey's *Historic Travels into Va.*, p. 57.

Of pearls there seemed to have been an abundance. Verezano, in the course of his expedition along the Atlantic coast, saw many savages with plates of wrought copper. Ribault speaks of a chief in Florida who had "hanging about his neck a round plate of copper, well polished, with one other lesser one of silver in the midst of it, and in his ears a little plate of copper." Carter says that the Indians of Lake Superior had pieces of red copper which they said came from the Saguenay.

The idea of personal adornment was a leading consideration. Loskiel tells us of the custom among the Lenapes: "One prides himself with the figure of a serpent upon each cheek, another with the tortoise, the bear, etc. They are as proud of their origin from the tortoise, the turkey and the wolf, as the nobles of Europe are of their descent from the feudal barons of ancient times."

The Knight of Elvas met with Indians in Florida, who had their bodies, thighs and arms dyed with black, white, yellow and red stripes. Some of them had plumes and others had horns on their heads, their faces black, and their eyes done round with streaks of red, to seem more fierce. Of the rings which they wear in their ears, the supply was practically unlimited. The New England and Western Indians indulged in pendants in the "form of birds, beasts and fishes, carved out of bone, shells and stone."

On the banks of the Mississippi river, Hennepin was courteously received by an Indian chief, clothed in a white gown, "which women had spun from the bark of trees. Before him two male attendants carried a thin plate of copper, as shining as gold." In the prairie country of Texas, Cabeza de Vaca saw a copper article which had been fashioned by the natives into the form of a "hawk bell." He says, "Among the articles given to us, Andres Dorantes received a bell of copper, thick and large, figured with a face, which the Indians had shown, greatly prizing it. They said it had been brought to them from the north."

II. These references, which were made by the various historians and travellers to the copper relics among the Indians, are worthy of notice, for they show the prevalence of the copper age, especially in the Mississippi Valley. Other references might be given to prove that copper was not only prevalent throughout the Mound Builders' territory, but that both copper and bronze were common among the different tribes of Mexico, Central America, and Peru. We, however, shall confine our view to the Mississippi Valley, in which the mounds were so numerous and take up the study of the copper which has been found here. We begin with the study of the maps, and especially those which illustrate the distribution of the mounds.

The author has given in the book on the Mound Builders, two maps of the tribes which illustrate the correspondence between the prehistoric and the protohistoric tribes. They

also throw light on the mode of life which was followed in the different parts of the country, and so give hints as to the kind of relics which abounded in each state or territory. It should be said that in addition to the maps and the books which have been published, the various cabinets, museums and colleges which are



AXES AND CHISELS FROM WISCONSIN.

scattered through the eastern part of the continent, where mounds are most abundant, have valuable collections of copper and relics, the one in Beloit College being especially noteworthy, but the museum at Milwaukee and the Field Columbian Museum are especially rich in the possession of copper relics.

The maps help us also to draw the comparison between the

historic and the prehistoric period, and lead us to realize that the description given by the historians would apply to the people who dwelt in this region in prehistoric times, and enable us to realize something of the prevalence of the copper age during the prehistoric period, and lead us to appreciate the copper relics which have come from the mounds, and are now in the cabinets and museums.

In referring to these maps, we shall take it for granted that the copper relics are sufficiently numerous to show the mode of life which was followed by different tribes; but their testimony is abundantly confirmed by the study of the stone relics, the pottery, the textile fabrics human remains, and other tokens which have been disclosed by various explorers among the mounds. It is not by the study of copper alone that we become convinced that the copper age prevailed among the Mound Builders, for evidence comes to us from the stone relics, the textile fabrics, the shell relics, and all other tokens. We may say, however, that copper was about the only material which came from a region remote from the mounds, and its presence may be regarded as that of an intruder, and yet it has given character to the works of the Mound Builders of every district to such a degree that one is led to believe that it was the copper age, rather than the stone age, which prevailed.

The copper came from a distance, but the fact that it was so widely distributed shows that there was a close connection between the mound-building tribes, in prehistoric times, and the interchange between them was so great, that copper actually tinged the culture which prevailed and became the index to that culture, rather than any other material, proof, we may say, that barter was carried on between the mound-building tribes in prehistoric times. The water courses greatly favored this, and made it easy to introduce copper from distant regions.

This may seem somewhat visionary, but the archaeologist becomes accustomed to the method of interpretation, which consists in comparing the tokens of one district with those of another, and then tracing the material which is extralimital to the locality from which it was brought, and so reads between the lines that he can trace the source from which the material was drawn. It is on this account that the copper becomes very significant to the archaeologists, for it gives hints of the movements and migrations of the tribes in prehistoric times, and at the same time shows that there was intercourse between the tribes which were remote from one another. Thus the geography of art becomes very instructive to the archaeologist, a geography which is not given by books or maps, but is contained in the natural features of the country, and shows the products of the different districts and shows the channels through which they were interchanged.

The school into which the archæologist enters, is not contained in any one building, but is as wide as the continent, and is covered by the canopy of the sky. Its different departments are distributed far and wide, but are concentrated into the different cabinets and museums, so that the explorer and the collector, work



CRESCENT KNIVES FROM WISCONSIN.

together in advancing the science of prehistoric archæology. It is not every one who can go into the field and study the relics as they are found "in situ," but the descriptions which have been given by the archæologists is such that we need no interpreter. We may take the reports which have been published by the various museums and compare them with the accounts which have been

written by the early historians and explorers, and learn from them the condition of the people who dwelt here in prehistoric times. The relics have, to be sure, unfortunately become articles of commerce, and many ignorant persons have dug into the mounds for the sake of getting the relics buried in them, and have often destroyed the most essential part of the record, and brought confusion into the science. Not only have stone relics been made articles of traffic, but copper relics are made into merchandise, and science is overthrown for gain; but the true method of science is not that of hoarding relics, but of comparing them.

III. Another point is to be considered. The character of the relics, which most abound in these different localities, may be relied upon as revealing to us the mode of life which was followed by the tribes. These reveal the mode of life which was followed in prehistoric times, just as history and ethnology reveal the mode of life and social condition which prevailed in the proto-historic period.

We may take the copper relics which are found in the different localities and compare them with the textile fabrics, shell ornaments, pottery vessels, sculptured pipes, engraved stones, and mythological figures, and even the human remains, and find the stage of culture which prevailed, and so learn the different phases of life which abounded during the prehistoric times. What is still more important is, we may take the testimony of the different explorers, who visited the Mississippi Valley, and compare them with the relics themselves, and then read between the lines, to ascertain the real condition which prevailed in the mound-building period. This work is not often done by the collector, but is required by the science of archæology, if it is to gain its proper position. "Where ignorance is bliss, it is folly to be wise," but there is a silent language contained in the relics which have been discovered in the mounds, a language which the true archæologist can read, but is a sealed book to the ordinary collector.

It is not copper alone that needs to be studied, but all the relics, the pottery, the textile fabrics, shell ornaments, pearls, and especially the mythologic figures.

Each geographical locality has its own record, the mounds of New York and New England has one, those of Virginia, and North and South Carolina and Florida another, and the Gulf states another. The stone graves of Tennessee, the swamp villages of Arkansas, the relics scattered over the valley of the Mississippi, Missouri and Minnesota rivers, and those found among the emblematic mounds of Wisconsin, all give their testimony as to the prevalence of a peculiar culture in each district.

IV. It is, however, the copper relics which have come from the mounds that we are studying at present, rather than the general subject, and to these in their wide range and their many sug-

gestive hints we would give attention. The geographical distribution of the copper is the point which is really before us.

We begin with the state of Wisconsin, a state which has furnished more problems than any other, and yet more aid to their solution. It was in this state that the emblematic mounds



SPUDS AND CRESCENTS FROM WISCONSIN.

once abounded, but unfortunately, they have so far disappeared that the key to the system would have been lost, had it not been for the few who appreciated its value and wrote up the system. The relics, however remote, are being gathered into cabinets. It should be said that no state in the union has a greater abundance of copper relics than has Wisconsin, and no where do they present

so great a variety as here. It is true that the effigy builders were mainly hunters, and were divided into classes, which had animal figures for their tokens, and yet it is singular that the copper relics of this region present a great variety of shapes and uses, some of them being in the shape of spear heads, arrow heads, others the shape of axes and knives; still others the shape of spuds, or what might be called spades, others in the shape of chopping knives, or curved blades, though the wooden handle, in which they are generally inserted, is lacking.

The description of these copper relics has been given by Mr. W. K. Moorhead, in his valuable book called *Prehistoric Implements*, the most of them being now in the collection of Mr. H. P. Hamilton of Two Rivers, Wis. "They were found on the lake shore in that vicinity in the sands, on old village sites, for miles along the lake shore. The land is sandy and has never been cleared. The whole tract is an old village site, and there must still be thousands of relics in this tract. Most of the spears have sockets with ribbed backs." The copper knives are very symmetrical and have a great variety of shapes, all of them being designed to be inserted in a handle. The copper fish-hooks and needles, and arrow points are also very interesting. They reveal the domestic life which prevailed. They show that one means of subsistence was by catching fish in the lakes. There are in this collection many awls and drills, implements designed for piercing, all of which show much skill on the part of the tool-maker. A cache of copper implements found at Oconto also yielded a large variety of shapes. The most of them are cutting implements, or may be called edged tools. One of them has the shape of a sword. The winged chisel is especially worthy of notice. There are several spuds in the collection. These were probably used as spades. They were placed in the end of a long wooden handle and were probably used as an agricultural tool. They are interesting because of the fact that garden beds are very numerous in Wisconsin. A large number of what might be called celts are in the collection. One is $15\frac{1}{2}$ inches in length, and weighs $15\frac{3}{4}$ pounds. Mr. Moorhead says the axe found in the Hopewell mound was 22 inches long, 6 inches wide, and weighed nearly 38 pounds. This so-called axe, has a prominent ridge, running the whole length of it. It is an uncommonly strong implement.

The so-called crescents are interesting, because they show that the same kind of cutting knives was used here as were found among the Lake Dwellings of Europe, as well as in Central America; in fact, they prevailed throughout the world in certain stages of progress.

These crescent-shaped figures were evidently at one time placed in handles of wood or horn, and they indicate that a mode

of life prevailed here on the banks of Lake Michigan which was similar to that which existed in the Lake Dwellings of Switzerland, long before the date of history.

These resemble the chopping knives which are common in the homes of the white people, and at the same time resemble those which were in use among the Eskimos. There is, perhaps, no tool which has a longer record than these crescent figures, which might be called chopping knives. They illustrate the survival of the fittest, for they seem to fit into any stage of society or any stage of history. They are found in all parts of the world, and in all periods of time. They compare well with the knives, and the spades, and the chisels, all of which are edged tools, but were used in peaceful pursuits. They are quite different from the spear heads, which were evidently used, mainly in war. Many of the spears in this collection have ribbed backs and rolled sockets, and are very finely wrought. There is an entire absence in this collection of copper plates, such as are common among the stone grave people, but an unusual number of copper tools, which might be used for mechanical and agricultural purposes, the spear heads being the most numerous and most artistic. It is undoubtedly owing to the proximity of the copper mines that so many of the relics were found on the lake shore. It is quite probable that work shops abounded.

A cache of copper implements found at Oconto, Wisconsin is worthy of attention. These are shown in the cut. No. 1 is the only specimen of the kind known in copper. Nos. 2 and 3 are small arrows. No. 4 is a large knife. No. 5 is an unusual form of knife or sword; No. 6 a chisel; No. 7 a leaf-shaped blade; Nos. 8, 10, 11 and 12 copper spuds; No. 9 is a pointed arrow head, and No. 11 a winged chisel. Another plate represents the copper celts. The middle figure shows a celt that is beveled at either side and at the end.

V. These various relics which have been gathered from the emblematic mounds are as interesting as the mounds themselves, and show the skill of the effigy builders as much as the effigies themselves. It hardly seems probable that a race of savages could have made articles like these. We must, therefore, ascribe to the effigy builders a high rank among the mound-building tribes of America.

We have shown elsewhere that the effigy builders were hunters and had great skill in building game drives, but they lived in villages, and were thoroughly organized. The book on Emblematic Mounds is full of illustrations on this point. In this we have shown that the wild animals, such as the elk, moose, buffalo and bear abounded in the state. The relics show the weapons with which the animals were attacked and were slaughtered in great numbers. The spear heads were made with a long, tapering, sharp

blade, which could be fitted into a handle, and could be thrown at the animals as they passed through the game drives. The knives show that the hunters were well equipped for skinning the animals; the needles and awls show that the women were skillful in tanning and dressing the skins and making them into garments. The correlation between the copper weapons and tools and the emblematic mounds is to be considered.

There are garden beds in which the so-called spuds were used, instead of hoes. There were also maple groves in which the chisels would be required for tapping the trees. A correlation between the tools and the surroundings tells a tale about the people who dwelt here, which is almost equal to a written language.

It is, however, a singular fact, that when we cross the river and enter the region of the Dakotas, we find a scarcity of effigies and very few copper implements. Mr. Brower of St. Paul has described some found in Minnesota, one of which was a copper spear head, which lay two feet below the surface, in an ancient camping ground. There are copper relics at the present time in the Davenport Academy, which probably belonged to the prehistoric tribes who dwelt along the Mississippi river, and who built the burial mounds of that region. There are no effigy mounds in the vicinity, but a large number of burial mounds. The copper relics in the Academy of Davenport are quite similar to those found in Wisconsin. They indicate that the people were hunters, but dwelt in villages, and generally led a peaceful life. As we pass farther south, we come to the swamp villages of Arkansas, and to the stone graves of Tennessee. In both we find copper very abundant some of the pieces being very graceful and highly ornamented. In the stone graves there were great varieties of stone relics, and a few specimens of copper.

Genl. Gates B. Thruston has described these in his excellent work. He speaks of copper ear-rings, copper plates, and copper implements. He has described the gorgets and the winged figures which were wrought out of copper. One copper ornament is in the shape of a cross, ear ornaments made out of copper are somewhat numerous, but the stone relics outnumber the copper relics ten to one. Passing up the Ohio river, farther east, we find that copper was used extensively by the mound builders of Ohio, and by those who dwelt upon the Atlantic coast.

There are stone hooks and claws, stone axes, stone celts, stone disks, and the discoids, the paint cups, the stone whistles, stone tubes, stone rings, ear ornaments and ceremonial implements, but the number of copper implements are few compared with the stone.

It was in Ohio that Squier and Davis found many copper relics, some of which have already been described. They resemble those which were found in Wisconsin, such as knives, spear heads,

spears or spuds, axes, drills and gravers, awls and chisels. These were found in the sacrificial mounds, and show an earlier state than the first European intercourse. Some of them were found beneath the stump of a tree, which was of great age. One of them was a double-bladed hatchet.

Several copper axes were found, one of which measures seven inches in length and four inches in width, and had a blade which flanged out from the head in graceful lines. Copper relics were found fourteen feet below the surface. The axes were of pure copper, unalloyed. One axe weighed 23 pounds. The conclusion is that the amount of copper extracted from the mounds would furnish a large supply. Bracelets are usually found encircling the arms of skeletons, and are bent, with perfect regularity. Boat-shaped specimens, made of copper, are described. A peculiar head dress was discovered in Ohio by Mr. W. K. Moorhead. An imitation of elk horns, covered with sheet copper, rolled into cylindrical forms over the horns. The antlers were 22 inches high and 22 inches across. There were two deposits of copper, aggregating 235 pieces. Among them were anklets and bracelets, sheets worked into fantastic designs, effigies of birds and fishes, large and small celts, one weighing 38 pounds, every known form of copper implement or ornament. These relics are now in the Field Columbian Museum. Copper beads and spear ornaments were found by Mr. Moorhead in the same group. A copper axe weighing 17 pounds and over seven thousand disks of stone. Squier and Davis examined the mound on the same farm, but did not come upon the relics which Mr. Moorhead found.

Mr. W. C. Mills has also found many specimens of copper in the same region. He explored the Baum village, and has found many shell gorgets, bone fish-hooks, cutting tools made of beaver teeth, flaking tools made of elk-horn, celts made of elk-horn, also arrow heads, discoidal stones, a large amount of pottery, stone mortars, but has failed to find many copper relics.

The explanation of this may be that these mounds are quite remote from the copper mines, and were built by people who had migrated from the east rather than from the west. Yet the largest amount, and most interesting, are those found in the Etowah mounds in the northern part of Georgia.

Some have imagined that these relics were post Columbian, inasmuch as they are very elaborate in their shapes, and show much skill on the part of the artist. Here are the dancing figures, furnished with wings, which remind us of the Cliff Dwellers of the far west. Mr. Thos. Wilson, and several others, have described them, yet their significance is not fully understood.

Copper relics are somewhat common in the Gulf states. Mr. C. C. Jones has described some of these. He says, speaking of the stone graves of the Nacooche Valley, "They are not unlike

those found in England, Scotland and France."

The most remarkable object found in the central or chieftain's grove, was a copper implement, which lay beneath the shoulder of the skeleton. Beneath it was a pure cane matting, which was discovered by the oxygen of the copper. The implement was 10 inches long, $2\frac{3}{4}$ inches wide. Near the upper end was a worn space, showing where the axe was inserted in the handle.

Clavigero says the Mexicans have copper axes with which they cut trees, and they were inserted in the eye of a handle. Native copper exists in certain portions of Cherokee, Georgia, and in certain portions of North Carolina, Tennessee, and Alabama.

Sir Walter Raleigh and companions observed copper ornaments in the hands of some of the Indians of the coast. The art of copper was neither practical or understood by the natives. The Lake Superior region furnished the natives with most if not all the copper which may be used.

Mr. Whittlesey has shown how extensive were the mining operations along the shores of that lake.

Messrs. Squiers and Davis, Prof. Wilson, and others, concur in the opinion that the copper used by the Indians in the preparation of the cold-wrought implements was obtained chiefly from the ancient mines of Lake Superior. Another ornamental copper axe and some copper rods, or spindles, were found in ancient graves in Etowah Valley. The rods remind us of the spindles referred to by the explorers of De Soto's expedition, with which, when heated, the natives were wont to perforate pearls to string and wear as beads.

In this vicinity were ploughed up venetian beads, varying in color, some being white, and others blue and red. No trace of iron, bronze or steel existed in these graves. The existence of extensive trade among the aborigines is verified by the contents of the graves, and especially by the copper relics.

The distribution of the copper relics, is perhaps the most important point. It will be acknowledged that the copper mines on Lake Superior were the chief source of the copper which has been found in the mounds. It is not known what tribe had control of the region, where these mines are situated, but it is probable that an extensive trade was carried on by them, with all the mound-building tribes, and this will account for the unusual number of copper relics found among the emblematic mounds, and especially those scattered along the beach of Lake Michigan.

ORIENTAL DEPARTMENT

EDITED BY CHARLES H. DAVIS.

ANCIENT EGYPTIAN ART.

Professor Flinders Petrie, in a suggestive lecture recently at the Hotel Continental, Cairo, distinguished between true and imitative Egyptian art. The work commonly styled Egyptian art, said the Professor, no more represents the true art of Egypt in its prime than do Roman copies of the noble creations of Greece; the former live not on their own merits, but as imitations of what is great in Hellenic art. As the Roman copies in the days of our great-grandfathers stood for the work of Greece, so, declares the Professor, are the vilest parodies today accepted by the public mind as representing the true art of the ancient Egyptians. This art, though more or less familiar to the Occidental world, is so vaguely understood that all its periods are confused together with the latest and least creative form is assumed. The whole of its long previous history is ignored, as well as the phases of transition through which it passed.

Professor Petrie stigmatizes that which is commonly called Egyptian decoration as being worse than the most flagrant debasement in ancient times. The professor places the commencement of the imitative period and the close of classic art in Egypt in the reign of the Rameses II, a sovereign notorious for his profusion of monuments, all of which, however, were depraved copies, if not bodily reproductions, of earlier works. The stiff lines of the mechanical draftsman, rather than the flowing lines of the artist, where the traditional convention under Rameses II, succeeded by a coarseness in detail under Rameses III that sought relief in the use of deep shadows.

Some of the wooden faces of coffins, however, are graceful and refined, because they depict conventional expression. Such artistic ideals as may be detected in the statuary of the time are disfigured by ungainly attitude and pose, as in the gold statue of Hercules and the statue of Amenardus. The statuary of the twenty-sixth dynasty is superior, largely due to the progress achieved in the mechanical art of polishing hard stones and obtaining precision of surfaces. Portraiture in this epoch evidently attracted the best artists, it being doubtless better

paid for, as in our times. Art under the Ptolemies is regarded by Professor Petrie as having reached a lower depth. He cites the Philotera of the Vatican as an example of the purely mechanical workmanship of the time, as evidenced in the stiff moulding of the limbs. Effect was only gained by exaggeration, much as in the Farnese Hercules. In later architecture new motives, independent of ancient Egyptian art, were sought for, as at Esneh.

The Professor instances the Deir el Abyad at Sohar, where so late as the fourth century A. D., the temple type was added to a Christian Church, as the priest and most interesting survival of the pristine style of building. The restoration of this monument is shortly to be undertaken. In graceful design, skill in the decadent period is nowhere better shown than in Trajan's pavilion at Philae.

Late explorations of the Italian coast, near Pompeii have changed the opinion of the antiquarians. The submerged Roman ruins along the coast used to be regarded as foundation walls thrown out for sea baths, but it was made clear that they are the remains of noble mansions, and that they point to the time when the land on which they stood was far above the level of the sea. The shore is, in fact, strewn with the wreck of buried cities. Coast roads have vanished, ancient quarries have been flooded, and the breakwaters of the harbors of classical story covered fathoms deep with water. A great submarine sea wall, with concrete piers, seventeen feet high, still protect the fragments. But neither the fragments nor the great sea wall have been visible in the light of day for two thousand years.

Professor Peschel, before a general meeting of the Berlin Academy of Science, June 10, read a letter from Professor Grunwedel, chief of the Prussian exploring expedition in Chinese Turkestan, dated February 21, at Komtura, near Kurtscha. The writer described archaeological discoveries made in the Cave of Temples, indicating that the founders of the temples were a red-haired, blue-eyed race and wore Persian costumes. Huge iron swords were found and also important manuscripts of the Ming period, a Budist pantheon and ancient frescoes. Professor Grunwedel alludes to the results of De Leco's investigations, and says he, Grunwedel, has gathered ethnographic materials richer than any previously discovered, especially potteries and embroideries.

AN ANCIENT HEBREW TEMPLE IN EGYPT.

One of the most valuable discoveries of the British School of Archaeology in Egypt during the past winter season was the identification of the ancient Hebrew Temple of Onias by Professor Flinder Petrie. When the persecution of the Jews by Antiochus caused them to flee, many of the fugitives settled in a remoter corner in the east of the delta, and in this sanctuary Onias IV, of the high priests, erected a temple after the design of that of Jerusalem, in order that this spot might serve as a realizing point for those in flight. This temple is duly mentioned by the historian Josephus, who states that it was erected on the site of an old Egyptian town. Some time ago it was realized that the position of this settlement was the town of Tel el Yehudiyeh, which is some eighteen miles north of Cairo, but it has been left to Professor Petrie to prove the identity of the location conclusively, and in this work he has proven the closest collaboration, even to the minutest particulars, of the statement set forth by Josephus.

Professor Petrie has published an account of his discoveries, and thus another link in Jewish history has been established. The ancient name of this town was Leontopolis, in honor of the lion-headed goddess, "Bubastis," and this fact was irrefutably shown by the discovery of the statue of an admiral of the Mediterranean fleet of Psametek II., representing his holding a shrine of the goddess in question. Josephus also states that this place is "full of materials," a fact fully borne out by the finding of an extensive stone-built ditch, about one mile in length, extending around the ancient Egyptian town, and which would have furnished Onias with ample constructional material for his temple. Outside the confines of the town is a huge mound, which constitutes quite an important landmark for miles around. On investigation Professor Petrie finds that its height is practically in accordance with the dimensions mentioned by Josephus, it being fifty-nine Greek cubits above the level of the surrounding plain, the Jewish historians figures being sixty cubits in height. Examination of the pottery that was found there, this mound identifies it with the second century B. C., while the coins which have been brought to light are of the period of Ptolemy Philomater, whom Josephus states granted the whole settlement, while a shed unearthed by building accounts bearing with other names that of Abram, affords convincing testimony that Jews were employed. Under these circumstances, the well-known archaeologist, who has carried out the excavations is

firmlly convinced that this is the site upon which Onias erected his temple.

The ground plan of this settlement is roughly an eight-angled triangle, and it was strongly fortified. On the eastern side was a wall of stone 767 feet in length by at least 20 feet in height, and terminating in bastions at the ends. The entrance was at the west acute angle, while the temple was at the south point. The hypotenuse of the triangle was formed of an inwardly curving wall, not less than 20 feet in thickness, rising to a height of 68 feet, at an angle of one 60 degrees, to support the temple, entry to the court of which was attained by means of a stairway 14 feet in width, in the eastern wall.

The settlement covered an area ranging from three to four acres in extent, and the sacred edifice was exactly half the size of the temple erected in Jerusalem by King Solomon. The rough lines of the structure built by Onias are now only visible, owing to the vandalism of the natives in quest of earth, but about twenty years ago the walls were standing and the pavements and pillars were then extant. Professor Petrie finds that the inner court of the Temple was 64 feet in length by 24 feet in width, while the outer court was 45 feet long by 32 feet wide, inside measurements. The architecture was Corinthian, with Syrian features in the battlements. When the natives first commenced excavating earth from the site some years ago, vast quantities of burnt bones were revealed, and the probability is that they were the remains of daily sacrifices. Evidence of this has been discovered in the foundations, since the lower parts have been unearthed on all sides. Huge cylinders of pottery sunk in the ground in which the sacrifices were celebrated, fresh earth being thrown upon each fire offering, in order to smother it so that traces of sacrificial rites remain alternate with layers of earth. Unfortunately, however, the valuable work carried on by the school is hampered by lack of funds, which is a regrettable fact, since the evidences of wanton destructiveness upon this site show the imperative of calling out the excavation and research work in Egypt upon a thorough and more extensive scale than is at present possible.

The Department of Egyptian Antiquities of the British Museum has recently received some interesting additions. Foremost of these are three statues of Usirtesen III. (B. C., 2400), representing the king in youth, middle age and as an old man with sunken cheeks. The figures, which are of gray granite,

In Denmark in 1807, a Royal Commission of the care of Amenophis I. (B. C. 1700), represented as the god Osiris, wearing the red and white crown of Upper and Lower Egypt. A portion of the inscription still remaining reads: "Amenhotep, beloved of Amen, Lord of the thrones of the two lands, giving life."

Excavations at Nippur. Plans, details and photographs of the buildings, with numerous objects found in them during the excavations of 1889, 1890, 1893-1896, 1899-1900, with descriptive text by Clarence S. Fisher.

In this finely printed and illustrated folio are represented the architectural results of the various expeditions sent to Babylonia by the University of Pennsylvania. This work will be completed in six parts, and will be divided as follows: Part I—Topography, the City Walls. Part II—The Fortress. Part III—The early Strata in the Temple Area. The Temple of Bel. Part IV—The Ruins in Tablet Hill. Miscellaneous Constructions. Part V—The Palace. Part VI—Pottery, Burial, Customs. The plans of the various buildings with details have been prepared from the surveys and measurements made during the expeditions by P. H. Field, Colman d'Erney, and Joseph Meyer.

The history and results of the Babylonian expeditions of the University of Pennsylvania have been set forth by Drs. Hilprecht and Peters. Nearly \$100,000 have been spent on these expeditions and between 30,000 and 40,000 inscribed objects have been discovered, the inscriptions of which cover a period of over 5,000 years. It will be many years before the immense amount of inscribed material is excavated by these expeditions, part of which is in the Imperial Museum in Constantinople, and part in the museum of the University of Pennsylvania, has been published. Professor Hilprecht has edited twenty-two volumes of cuneiform texts.

The work of the first expedition (1888-89) was on the whole tentative. It includes, however, an accurate survey of the whole ruins, the discovery of a Parthian palace, and the unearthing of more than two thousand cuneiform inscriptions. The second expedition (1889-90) resumed the excavation of the Parthian palace and acquired about 8,000 tablets of the second and third pre-Christian millenniums. The third expedition (1893-96), gathered no less than 21,000 cuneiform inscriptions, and was enabled to fix the age of the different strata with great accuracy. It excavated three sections of the temple court down to the water level, and

discovered the first well preserved brick arch of pre-Sargonic times (about 4000 B. C.), found the large torso of an inscribed statue in dolerite of the period of Gudea, and over five hundred vase fragments of the earliest rulers of the country. The fourth expedition (1898-1900) was the most successful of all. It explored the Parthian palace completely, and examined more than one thousand burials in various parts of the ruins. It definitely located the famous temple library of Nippur, from which thousands of tablets had been previously obtained, and in addition to many other inscribed objects, like the votive tablet of Naram-Sin, a large dolerite vase of Gudea, etc. It excavated about 23,000 tablets and fragments, mostly of a literary character, and it demonstrated by the indisputable facts that the Ziggurrat, the characteristic part of every prominent Babylonian temple was a creation of the earliest Sumerian population.

The work before us is the first complete record of the expeditions. Part I enters very fully into the physical features of Babylonia, the topography of Nippur, and the city walls. It has twenty-six plates of plans, details and photographs of buildings, etc. The price of the six parts is \$2.00 per part. Subscriptions may be sent to Lock Box 165, Rutledge, Delaware Co., Pa.

A publication has long been wanted by students of Oriental art, showing in historical and chronological order typical examples of Egyptian art. Where available copies of the subjects exist, they are mostly too small, faulty in execution and often difficult of access, being hidden in books and periodicals including other subjects. In order to supply such a want, F. Bruckmann, of Munich, will soon issue a work entitled: "*Monuments of Egyptian Sculpture*," edited by Baron Fr. W. von Bissing. It will consist of 114 plates in chronological sequence, containing a collection of the best statues and reliefs of Egyptian antiquity, from the most ancient times down to the Roman epoch, copied in large and faithful reproductions from the originals, many of which have not heretofore been published.

The text which will accompany the plates will not only contain remarks on the origin and present resting place, state of preservation, size and material of the respective objects, but also a brief summary of the same as well as notices of the chief parallel sculptures and literary allusions. Each plate will be reproduced by the most perfect of all present photo-mechanical methods, viz: by engraving. The copies are made from objects in Athens, Berlin, Bonn, Cairo, Florence, London, Munich, Naples, Paris,

Rome, Turin, Vienna, and other museums. The work will be divided into twelve parts, each containing twelve plates, 14x19 inches, and will appear at intervals of about two months. The subscription price is sixty dollars, but will be raised to seventy-five dollars on completion of the work.

In an article on the "Critical Study of the Bible," by Professor L. B. Paton, in the *May Homiletic Review*, the writer says: "As a result of modern study of the Old Testament all the main incidents in the history of Israel stand forth as we have always supposed them to be. Practically all critics agree that Israel was delivered from bondage in Egypt by Moses, and that he was the prophet and the law-giver of the people. The conquest of Canaan and the narratives of the Judges are in the main unquestioned. Saul and David are admitted to stand in the full light of history; and in regard to the trustworthiness of kings no critic has any doubt. The best evidence that Higher Criticism confirms rather than overthrows the main elements of traditional belief is found in reading any work of the modern school on the history of Israel. Professor Henry P. Smith, for instance, is one of the more modern radical investigators, yet his *Old Testament History* contains little that strikes the conservative reader as different from that which he has always believed. Only in the case of a small proportion of the Bible has criticism found it necessary to modify the ancient conceptions. Modern critics do not believe that Moses wrote the entire Pentateuch. Isaiah 40-66, they regard as a work of the latter prophet than Isaiah, Daniel, they view as a product of the Greek period, and they assign fewer psalms to David than were formerly ascribed to him. These are the changes that have caused such an outcry against criticism in our day. Is it fair, however, after criticism has confirmed the traditional conception of three fourths of the Bible, to denounce it as destructive because it proposes to modify our conception of one-fourth? This is a good deal like calling a physician a murderer because he accidentally loses a case. We may not like all the conclusions of the modern school, but let us at least have the honesty to admit that the results of criticism are not as black as they are sometimes painted. It has done more to establish the received faith of the Church than it has done to overthrow it."

There has recently been issued at Cairo a magnificent work entitled "*Arabic Palaeography. A Collection of Arabic Texts from the Third Century of the Hejira, till the year 1000.*" Edited

by B. Moritz. The aim of this work is to represent the development of the Arabic writing particularly in manuscripts, based upon the rich material in the Khedivial Library, Cairo. There are, it is true, similar publications; many of them, however, are of no use now, since they have been undertaken without the help of the photography, the indispensable process for such works.

The London Palaeographical Society intended—under Wright's direction—to publish an extensive collection of all Oriental writings; from want of interest, however, it came soon to a standstill. Twenty-five plates with Arabic and seven with Persian facsimiles are all that have ever been issued in this line. Later on Professor Ahlwardt has reproduced on twelve plates in Quarto no less than sixty-three kinds of Arabic characters (with the exception of the Cufic writing), as a supplement to his catalogue of Arabic manuscripts.

Of the 188 phototypic plates forming the present work, forty-seven plates being Cubic characters. The Khedivial Library recently bought some dated Korans in Kufic, which facilitate the chronologic arrangement of undated specimens. More than one hundred plates are devoted to the Nashi, fifteen of which show the writing of the first three centuries, on papyrus, leather, parchment, paper and stone. The writing employed in proper books from A. H. 350 to 1000—is represented by 118 specimens, among which are seventeen autographs of famous authors and twenty specimens from Maghrib manuscripts.

Forty-eight plates represent quite a number of magnificent Korans of the Mameluke beys' period, and some Persian, Indian and Turkish Korans. On account of the splendid ornamentation, they are of particular interest and bring rich materials for the history of Mohammedan art. The text, by Professor Dr. Moritz, director of the Khedivial Library, is in preparation.

The origin of the Gypsy race has always been an interesting study both of linguists and historians. Whence they originally came, and what were the motives which drove them from their native soil, are questions which, after having passed through a long stage of absurd speculation have of late years been ventilated by competent investigators, but are still only partially solved. One thing, however, is certain, that whenever we find a Gypsy who retains any portion of his original language, no matter where we find him, the primitive element, be it much or little, is Indian. It is also Indian of the Hindi, rather than Indian of

the Tamil type. Their language then—a daughter of the old Sanscrit—gives a real clue to their origin. Their Indian origin, proved incontestably by their language, was first partially advanced by Rudiger in 1782, and in his track there have followed many investigators, who, by collecting, comparing, or arranging new and old linguistic material have placed the matter beyond a doubt. Pott wrote a wonderfully exhaustive work on the subject. It has been followed up by Paspatis, Miklosich, Borrow, Leland, Smart, Crofton and others.

There has recently appeared a little book of about one hundred pages, *Memoire Sur Les Migrations des Tsiganes a Travers l'Asie. Par M. J. de Goeje.* (Leyden E. J. Brill, price 2 fr). The learned author gives the results of his studies concerning the origin of the Gypsies and their wanderings from their ancient home in northwest India. He shows that the Gypsy immigrants, both in Europe and Egypt, had a common origin in the basin of the Indies, but that their original speech naturally acquired differing foreign elements as they traveled slowly westward. Their language, for example, of those European gypsies who, in 1417, emigrated from Hungary into Germany, had a large admixture of Greek and Armenian words, which were of course, lacking in the speech of their fellows who went to Egypt and on their way adopted many Persian and Arabic words into their vocabulary. He shows from Arabic sources that the Gypsy emigrants left India much earlier than had formerly been supposed. Some writers have identified them with the Zuts or Duatts of Northern India—whom Firdusi mentions as having been called into Persia to the number of about 10,000, about 420 A. D. It is known, however, that the first considerable body left Asia for Europe before the twelfth century, perhaps in consequence of disastrous encounters with the Arabian conquerors, and Tamerlane was unquestionably the cause of still more numerous emigrations, in the fourteenth century.

Of the five million gypsies now wandering in Europe, Asia, and America, their language, though split into different dialects, has remained about the only tie which binds the widely scattered nomadic people together.

THE CARE OF ANCIENT MONUMENTS.

There has recently appeared from the University Press, Cambridge, a book of 260 pages, entitled: "The Care of Ancient Monuments," by G. Baldwin Brown, M. A. Gordon, Professor of Fine Art in the University of Edinburgh. This book gives

an account of the legislative and other measures adopted in European countries for protecting ancient monuments and objects and scenes of natural beauty, and for preserving the aspect of historical cities. Part II is devoted to the monument administration in the various European countries, and from this we learn that in France, an official list of the monuments classed as of national importance and are placed under the control of the Commission of Historical Monuments, has been made, and it contains 308 pre-historic monuments, such as dolmens and standing stones. A monument so classed cannot be destroyed, even in part, or made the object of any work of restoration, repair, or modification of any kind without the consent of the Minister of Public Instruction and the Fine Arts. Structures not classed are not legally defended.

In Great Britain, from 1882 until his death in 1900, General Pitt Rivers, a former president of the Anthropological Institute, held with great distinction the office of Inspector of Ancient Monuments, but no successor to that office has yet been appointed. For ten years previous to 1882, Sir John Lubbock, now Lord Avebury, had endeavored to procure the passing of the bill, but it met with great opposition, as interfering with the rights of property. The schedule to the Act enumerated sixty-eight monuments or groups of monuments, really all of them prehistoric, but left the application of the act optional even to these. There are now forty-one monuments in Great Britain under the protection of this law. In Ireland, the Board of Public Works has undertaken the guardianship of seven prehistoric monuments. In Austria, a Central Commission has been formed to excite the interest of the public in the study and maintainence of monuments, including prehistoric monuments, and to assist the efforts in this direction of learned societies and experts. It issues a periodical publication and makes yearly reports. In Holland, a State Commission was established in 1903 to draw up an inventory of monuments, including the prehistoric.

In the Canton de Vaud, Switzerland, megalithic monuments and erratic blocks, together with the ground upon which they rest, can be appropriated by the State, on just an equitable compensation being paid. It is strictly forbidden to any person not furnished with a special authorization from the government to carry on any excavations or researches in the waters of the Canton, or on the borders of Lake Leman. Neuchatel, or Morat, with the intention of recovering objects belonging to the lake

dwelling, or to take up and appropriate the piles which mark the sites of these stations, under a penalty of two hundred dollars.

In Denmark in 1807, the Royal Commission for the care of antiquities was established. The people make it a point of honor to collect material for a history of pre-historic times. The owners voluntarily place their monuments under the inspection of the Museum of Northern Antiquities, and in this way several thousand of pre-historic tombs and barrows have been preserved. All those on the crown domains or in the State are declared national property. The clergy have been required to protect all those on their glebe lands. During the ten years, 1892-1902, 2,500 monuments were put under protection. Norway has a State antiquary, who has a council to advise him, and who exercises superintendence over the ancient monuments. In Russia an Imperial Archaeological Commission was appointed in 1859, with power to carry on excavations in ancient burial mounds and other localities. To Finland the Swedish Edict of 1666 still applied, until an Imperial Ordinance of 1883 made more ample provision. In 1889 an Archaeological and State Archaeologist were appointed. The yearly budget of the commission amounts at present to \$16,000.

In Servia the professor of Archaeology is custodian of the National Museum. An Archaeological society for the preservation and acquisition of monuments from all periods of the pre-history and history of the land was founded in 1883. In Bulgaria a monument act was passed in 1889. It deals also with the collections of popular songs, traditions, records of customs, and all other material of folklore, and provides for rewards to persons communicating information.

Volume I of "A History of Architecture," by Russell Sturgis, A. M. Ph. D., will soon be issued from the press. It will treat of the, as yet, only half-known epochs and styles—the Egyptian architecture, the Babylonian and Assyrian and later Western Asiatic styles; Greek art down to the final conquest by Rome, about 100 B. C.; the earlier Italian art in its various forms—another subject only half understood as yet; the Roman Imperial architectures from 100 B. C., to 400 A. D., about, and the pre-historic and the non-historic buildings of the old times which are thought to antedate the year 400 A. D.. This volume will contain also the further development of the last named subject down to about 1000 A. D., that is to say, the time of the Lake Dwellers of Southern Europe, the Scandinavians and Celtic

North of Europe, Russia, and tropical and semi-tropical America. The work will be completed in three volumes, each volume containing some 500 illustrations.

BABYLONIAN ASTRONOMY.

Dr. Kurt Laves of the University of Chicago, has an interesting article in the May Popular Astronomy on the Babylonian Calendar. Our knowledge, Dr. Laves says, of Babylonian Astronomy, and the Babylonian mode of calendar keeping, has until recently been extremely limited, and inadequate. Beyond the fact that the Babylonians watched the stars and planets with great care, and that they were familiar with the Saros Cycle, our well not to dismiss this interesting chapter with a few words, as average text books on astronomy had very little to add. But it is not known to very many, that during the last twenty years, great strides have been made in this province of learning, and that modern authors who write on General Astronomy will do well to dismiss this interesting chapter with a few words, as heretofore. The student who wants to inform himself adequately along these lines, will find a wealth of information contained in the eighteen volumes of Assyriologische Leitschrift to which many authors on Assyriology and Calendarography, have contributed. He will do well to pursue with attention the articles written by Epping and Strassmayer, to whom, in the first place, is due the credit for a new understanding of the astronomy of those very remote ages. Furthermore, he is invited to read the conclusions which Eduard Mahler has been able to arrive at, starting as he did from the foundations established on the one side by Epping, and on the other side, by the world famous school of chronology of von Oppolzer.

The Calendar of the Babylonians was not clearly understood by scientists till Eduard Mahler, the assistant of the Geodetic Survey of Austria unriddled its mysterious construction, and revealed a system of great symmetry, and comparative simplicity. It will suffice here to say, that two kinds of years were used, a common year of three hundred and fifty-four days, and a year of intercalation, which had a length of three hundred and eighty-three or three hundred and eighty-four days, divided into thirteen months. Since it happens that the year of the tablet is a common year, we need but consider its beginning, and record the length of the individual month. The beginning, falls on the 21st of April, the average length of the month was twenty-nine and five-tenths days. In the average length of the month we recog-

nize the synodic month, which, as shown by Mahler, was known to the Babylonians, with unusual accuracy. Since the month had to contain an interval number of days, the Babylonians alternated with months of twenty-nine and thirty days, so that the length of the year was equal to twelve synodic revolutions of the moon. We are used to the universal custom of beginning the days at midnight, but this was not the usage of the Babylonians. They began the day at 6 p. m., and this custom likewise prevailed among the Hebrews. The reason for this particular mode, is evidently to be found in the fact that the Babylonians originally obtained the beginning, from the light of the new moon, which becomes visible in the evening. After their system of accurate observation had furnished them a very precise determination of the length of the synodic month, it proved not to be necessary to have reference at the beginning of each month to the observations of the first light of the moon.

Mahler, in his book on the "Chronology of the Hebrews," points out the custom prevalent among the Hebrews not to begin their new month until three persons had reported to the Synhedra, that the new light of the moon had become visible. It has been remarked that the year 236 S. E. began on the 21st of April. We shall see later, that this was not always the case, although it will be proved to be true that the beginning is to be found between March 28 and April 24. This reveals the important fact, that the calendar of the Babylonians has reference to the solar cycle, and is not to be considered as a purely lunar calendar. It will be seen that the accuracy of the Babylonians in recording the positions of the planets in reference to the neighboring stars, is unfortunately not sufficient to obtain from them an improvement of our planetary tables. Indeed, Epping computes that the observation of spherical distances obtained by the Babylonians will entail an error of about one-sixth of the diameter of the moon, and only observations made at a very remote epoch could become of value to us with respect to our planetary tables. Whilst the determination of the year to which the tablet belonged presented no difficulties to the investigator, in general, this will constitute one of the hardest questions to be answered. It was stated before, that Babylonian records register mainly the day of the month and the year of the king. Before we can know the corresponding Christian date, it is necessary to have a table of the kings of Babylon, and precise statements of the duration of their reigns. This obtained, every Babylonian date becomes at once intelli-

gible to us. This has been successfully accomplished by Eduard Mahler, and his Babylonian tables are now almost universally adopted by the historians. These tables lead us as far back as 747 B. C., and they are continued to about 200 B. C. For the time before 747 B. C. no tables are yet available, but the continuity in the development of the cultus, Chaldeans make it more than likely that the system of calendar keeping had been in vogue before the era of Nabonassar. The modern excavations will most likely give us information about the time before 747 B. C., and in case we should obtain a record of kings similar to that of Ptolemy, the historian will at once be benefitted by it. It had been noticed before Mahler that two different kinds of years were used by the Babylonians, but it seems to have been his privilege to point out the order in which common years and "leap year" were alternated. We have known for a long time that the Chaldeans had the knowledge of the Saros Cycle, that great period of 223 lunations which is exactly equal in draconic years (or eighteen Julian years and ten or eleven days). By means of it they were able to foretell the eclipses with an accuracy that must truly have inspired the common people with an unbounded awe for the priest clan. It was likewise known that the Greek astronomer Meton used for the perfection of the Greek calendar another mysterious cycle according to which two hundred and thirty-five lunations are equal to nineteen tropical years.

If the calendar of the Babylonians had rested solely on the period of the sun, a calendar with years of equal length should have been the logical outcome. But that this was not the case, was proved by the comparison of Babylonian records. The question then arose, in what order did lunar years and intercalated years alternate, and it is to the high credit of Mahler that he solved this question in the masterful manner in which he did it. A characteristic feature of the lunar period is evidently adhered to throughout the entire Babylonian calendar. The disorder in the length of the month in our own calendar, stands out in bold relief to the lawful and consistent adherence to the original unit of the subdivision of time.

ARCHÆOLOGICAL NOTES.

Prof. Benjamin W. Bacon, of the Yale Theological School, who for the last year has been director of the American School of Archaeology at Jerusalem, will retire in the coming college vacation, and his successor as director of the school for the coming year will be David G. Lyon, of Harvard. Application has been made to the Turkish government for permission to make archaeological excavations outside Jerusalem, and they will be begun in the coming year if the permit is granted.

Dr. Sven Hedin has proceeded to Persia, where he proposes to explore thoroughly, from a scientific standpoint of view, the salt deserts of Dasht-i-Kavir and Dasht-i-Lut in the eastern part of the country. He hopes afterwards to proceed through Afghanistan to India, and there organize an expedition for the exploration of Central Tibet. Since the above was written, a telegram from Teheran, dated April 10, announced the arrival of Dr. Hedin in Seistan on the previous day after an extremely interesting journey by Jandak, Turoot, Khur, Tabbas, Naiband, and Neh, in the course of which he crossed the Dasht-i-Kavir three times. The explorer said he was in splendid health. He had made a map of one hundred and sixty-two sheets, had taken hundreds of photographs and sketches, and had formed a geological connection. He was to leave for Nusski on April 12.

Drs. Grenfel and Hunt have made a preliminary report of their excavations during last winter and the early spring at Oxvrhynchus. They report the most remarkable discovery yet made of literary papyri, which dates range from the second century B. C. to the sixth century of our era. In a Roman mound, a heap of broken literary papyrus rolls was discovered. Amid hundreds of smaller fragments there were a couple of cores of rolls, each containing ten or twelve columns, several pieces containing five or six, and many containing one or two. One of the longer pieces contains about one hundred and fifty verses of Pindar's Paeans, with the authorship proved by a coincidence with a Pindaric fragment, already known. The text is accompanied by elaborate explanatory scholia. Another long poetical fragment is from the lost play "Hypsipyle," by Euripides. Of the prose manuscripts, several belong to extant works of Plato,

Demosthenes, Lysias, and Isocrates. The most valuable of the prose pieces is part of an unknown history of Greece, possibly by Ephorus or Theopompus. Another prose text is part of a commentary on the second book of Thucydides, different from the extant scholia. In another Roman mound, fragments were found of a library, the owner of which had been interested in the lyric poets, and seemed to have owned two or three manuscripts of Sappho's poems, as well as one of Bacchylides. One of these fragments of papyrus contains more than seventy lines of Ceridas, of whom only fourteen lines were known before. A Byzantine mound yields a vellum leaf ((forty-five lines in all) from a manuscript of a lost gospel, telling of the visit of Jesus with his disciples of the temple at Jerusalem and their meeting with a Pharisee, who reproaches them with their failure to perform the necessary ceremonies of purification before entering the Holy place and describes in some detail the formalities which he himself had observed. The question of the nature and value of the gospel to which this fragment belongs is apt to provoke much controversy.

An important contribution to our knowledge of the ancient language of Chaldea is Dr. Vincent Brummer's valuable investigation into the formation of the Sumerian verb *Die Sumerischen Verbal-Afformative nach den Aeltesten Keilinschriften. Leipzig*). Dr. Brummer has confined himself to the inscriptions of the Semitic period omitting the bilingual texts and lexical tablets in which Semitic influences are often apparent. The suffixes of the verb are conveniently divided into prefixes, verbal determinatives, infixes, and postfixes. In an appendix Dr. Brummer points out that one of the distinguishing features of the language was the position of the object before the verb with which the sentence ended. In this respect the Sumerian stands in marked contrast to the Semitic language and the similar syntactical construction in Assyro-Babylonian must be due to Sumerian influence. Another appendix discusses the relation between the Sumerian dialects both of which were in use at the same period.

DENEHOLES OR UNDERGROUND CHAMBERS.

By A. L. Lewis.

Not far from the banks of the Thames, between London and Gravesend, and on each side of the river, there are some deep narrow shafts, at the bottom of which are chambers cut out of the chalk; these are called "deneholes," and, so far as I know, are not found anywhere else, and I think it may be worth while to place a short description of them before your readers, so that if any similar excavations are to be found in America a comparison may be made between them.

It has been supposed that these "deneholes" were chalk mines, but, as the chalk comes to the surface a very little way off, it is not likely that people would have sunk shafts sixty feet deep to get at it, although when dug out it was probably used in some way or other, and it seems on the whole that the hypothesis that the deneholes were the secret storehouses for grain said by the Romans to have been made by the Britons along the banks of the Thames furnishes the most probable explanation of their existence.

At a place called Hangman's Wood, near Greys in Essex, on the north branch of the Thames, there were more than fifty of these deneholes in six acres; at this place the chalk is covered by a bed of Thanet sand with a little gravel on the top, and shafts about three feet wide were sunk through them into the chalk below; footholes were cut into the sides of the shaft, some of which still remain; when the chalk was reached, oval chambers, usually six in number, each from twenty to thirty feet long, ten feet or so wide, and perhaps twenty high, were cut in it, radiating in some cases the ends of the partitions between the chambers which have been cut off and left standing as pillars.

A heap of earth has accumulated at the foot of each shaft during the centuries that have elapsed since its formation (for what little evidence has been found goes to show that they are at least as old as the Roman occupation, and perhaps much older). Here and there the roofs have broken in because they were cut too near the sand, and in several instances a chamber belonging to one shaft had been cut into in making a chamber from another. Several "deneholes" of the same kind are found near Besley, on the south side of the Thames, where the strata are similar to those at Greys.

LITERARY NOTES.

The East has been from the earliest times the home of the wonderful and mysterious, both in word and deed. The precepts of Ptah-hotep and the "Book of Instructions" of Kakemmma, who lived about B. C. 3800, show us to what an extent moral philosophy, as illustrated by means of proverbs, had gained a footing in the minds of primitive civilization. The famous story of the possessed princess of Bekhten, which is inscribed upon a tablet now in the Louvre, and which was composed during the reign of Rameses IX., about B. C. 1000, shows that stories and legends, similar to those found in the world-renowned "Arabian Nights," existed at a very early period. The literature of nearly every Oriental nation, both past and present, contains specimens of the proverbs and witty sayings which were current among the people at the time. The Book of Proverbs is a very good specimen of this kind of literature which was current among the Jews and the "Arabian Nights" are too well known to need further comment. The least known works of this kind, however, are those which are to be found in Syriac literature. The work of Gregory Bar Hebraeus, which we noted in a recent issue, is a fair specimen of the witty sayings which were to be heard in the caravansaries of Mesopotamia about the twelfth century of our era.

It is curious to note in this work of Bar Hebraeus that the idea of "Woman's Rights" had already begun to assert itself in the East, the last place where such a subject could have been expected to take root. Another good story is the one told about a certain miser. We give it as translated by Dr. Budge:

"A certain miser used to rise up during the night whilst his children were asleep, and if he saw any of them lying upon his right side he turned him over upon his left, saying, 'I do this that the food in them may not be too quickly digested, so that they may not wake up in the early hours of the morning and ask for something to eat before anything is ready for them.'"

Rev. Camden M. Coburn, D. D., in an article entitled, "Early Bible Narratives Reinterpreted," in the March *Homiletic Review*, says: "It is not Adam, the first man, but Adam, the universal man, who is the hero of the epic of creation. Adam, the first man, does not keep his individuality and personality intact even in the opening chapters—and then drops out and is never heard of again. The personal local Adam dropped out of Hebrew memory as completely as the individual characters used in our Lord's parable dropped out of memory."

A recent volume, entitled "Attic Inscriptions," being the second volume of Roberts' "Greek Epigraphy," edited by E. S. Roberts, master of Caius College, Cambridge, and Ernest A. Gardner, professor at University College, London, gives more than five hundred inscriptions, dating from the sixth century B. C. to the fourth or fifth century of one era—Decrees of the Senate and People, of Foreign States, Tribes, Demes, etc., Imperial Ordinances, Documents pertaining to finance and to ritual, Dedications of Statues, Inscriptions on the seats of the Theatre of Dionysus, Sepulchral inscriptions, etc. The commentary is concise, but it gives all necessary information in regard to technical phrases and unusual words and constructions, as well as regards matters of history and antiquities.

A Levantine Log-Book. By Jerome Hart. This book of travel sketches is the result of two seasons in the Levant. In some of his discussions of conditions in the Levant, notably in Egypt, the author has given a résumé of the conditions up to the spring of last year. This will be noticed particularly in regard to the great irrigation schemes which England is now successfully carrying on in Egypt. The writer gives the results of the investigations of Sir William Garstin and Sir Benjamin Baker into the stability of the Assouan dam, quoting verbatim from their reports. In the introductory chapter are given some useful particulars for Levantine travellers as to choice of routes and steamship lines. (New York, Longmans, Green & Co. 8vo. pp. xii—404. 51 illustrations. Price, \$2.00.)

Contents of Man. March. Investigations at Knowle Farm Pit. Rev. H. G. O. Kendall.—Note on a Trephined Skull from New Britain. C. G. Seligman.—The Method of Shoeing Oxen in Palestine. C. J. Prætorius.—Obituary. James Bonwick. F. W. Rudler.—Ancestor Worship in Japan. W. G. Ashton.—Decorated Shields from the Solomon Islands. A. von Hugel.

The Tibetan—English Dictionary, on which the well-known Tibetan scholar Rai Sarat Chandra Das, Bahadur, C. I. E., has labored for more than ten years and brought into play his ripe scholarship, is now issued by the government. The compilation is as good as could be desired, and supplies with every information that has been possible for him to gather on the subject, of the Tibetan Buddhism known, in other words, as the Mahayan, or Northern School of Buddhism. The book will make a landmark in the comparative study of religions. The words have been judiciously selected, well arranged, and give the English and Sanskrit equivalents of all important Tibetan words. In compiling the dictionary the author received most valuable services from Pandit Satis Chandra Vidyabhusan, M. D., who was deputed by the government to co-operate with him.

The January issue of *Hermes* contains an account of a valuable find made by Prof. Ulrich Wilcken. He put together forty pieces, large and small, of a papyrus making a document twenty-three centimetres long by eighteen centimetres wide. The language of the writing is Greek, and the skill of the investigator has succeeded in finding in it a fragment of a hitherto unknown source for the history of the Second Punic War, and that, too, a source of the first quality, namely, the work known as the "Deeds of Hannibal", composed by Sosylos, the war companion, secretary, and language teacher of the great Carthaginian general. The fragment belongs to the papyri collection of the University of Würzburg, having been bought for this collection by Dr. Prym, the professor of mathematics in that institution. The Munich *Allgemeine Zeitung* says we may believe Wilcken when he avers that it was hard for him "Librum non scribere" on his discovery.

"Histoire des Etudes Celtiques", by Dr. Victor Tournier, has just been published in Belgium. The introduction deals with the history of the Celtic races, their languages, ancient and modern, the sources of their literatures, and the Pan-Celtic movement. In the remaining two hundred pages the author discusses the state of learning in Ireland and Wales from the earliest times to the present day, the work of Gaelic, Manx, Cornish, and Breton scholars, etc. There are also chapters on current theories as to the Celts and their languages, on Celtic philology, and on the teaching of Celtic. The book may be had on application to the author, at 98 Rue Defacqz, Saint Gilles, Bruxelles, Belgium.

The Hand. A Survey of Facts, Legends and Beliefs pertaining to Manual Ceremonies, Covenants and Symbols. By Lewis Dayton Burdick.

From legends, fables and myths we often gain correct ideas of the true significance of rites and customs which still, in modified survivals, form an interesting and important part of our daily lives. So says Mr. Burdick, and acting upon this theory, he has collected a wonderful lot of out-of-the-way information relating to the hand. When one stops to think of the many uses to which the hand is applied, we can well believe with Darwin, that man could not have obtained his present dominant position in the world without the use of his hands, which are so admirably adapted to act in obedience to his will.

Mr. Burdick has searched through all literature and has thoroughly covered the ground, showing the use of the hand as the executant of the brain, as a symbol of life, and of authority, an indicator of fortune, in primitive reckoning, the laying on of hands, trial by hand, taking an oath, the social hand, the healing hand, the hand of evil, etc. This is a very interesting and read-

able book. (Oxford, N. Y. The Irving Company 12mo. pp. 238. Price \$1.50.)

In the *Princeton Alumni Weekly* of Nov. 10 Professor Howard Crosby Butler, leader of the Princeton expedition to Syria, continues and completes his narrative of the important discoveries made by the expedition, which will give to the scientific world the material for reconstructing the history of ancient Syria.

The store of paper impressions or "squeezes" made by the expedition, a collection of some three hundred and fifty pieces of glass all in perfect condition, the collections of pottery, bronze ornaments, and coins, and a few of original inscribed stones, were carefully packed and shipped from Beirut and are now in Princeton. The work of making plaster casts from the paper impressions is now under way, and before the year is over the members of the expedition hope to display a large number of plaster casts, of architectural details, and of inscriptions, together with the glasses, coins, and other antiquities, in a single room which will be entirely Syrian, and will make a unique exhibition of Syrian antiquities.

Religion of Israel, Historical Sketch, is the title of a book by Canon R. L. Ottley, which traces in general outline the character and development of Hebrew thought and spiritual belief. His charters are arranged in chronological order, beginning with the primitive religion of the Semites, and following the course of the nation's history under the influence of Moses, Samuel and the prophets; the influence of the exile is then discussed, followed by the rise of Judaism, which in turn came in contact with Hellenism, and was finally displaced by Christianity. This book is intended to supplement the author's "Short History of the Hebrews." (8vo. pp. 240. Price 4 shillings.)

By Nile and Euphrates, A Record of Discovery and Adventure. By H. Valentine Geere. This is a highly important and interesting volume. The author has served on the American excavations at Nippur under Dr. Hilprecht, and has assisted Professor Petrie and Dr. Grenfell and Dr. Hunt in their work in Egypt, and his volume gives an interesting account of his experiences at the mounds and in his journeys in out-of-the-way places. Many interesting spots off the beaten track are described, and their inhabitants are picturesquely sketched. The account of the work at Nippur is especially interesting, because it gives a close statement of what has been accomplished by each of the different excavating parties and explains certain points which have given rise to much discussion.

Five years ago the University of Heidelberg acquired twenty-seven more or less well-preserved papyrus leaves, inscribed on both sides, containing in uncial writing most of the Septuagint text of the prophets Zechariah and Malachi, and dating probably from the sixth or seventh century, A. D. Professor Deissmann of the University has edited this work under the title *Die Septuaginta-Papyri und Andere Altchristliche Texte der Heidelberger Papyrus-Sammlung*. It contains sixty photographic plates, and is issued as Vol. 1 of the "Veröffentlichungen aus der Heidelberger Papyrus-Sammlung" (Publication of the Heidelberg Papyrus Collection). The price, bound, is \$6.50. The volume contains, in addition to the edition of the Septuagint codex, the text and commentary on the following pieces: A Graeco-Coptic parchment leaf with Exodus, Chap. 15, of the seventh century, A. D. A fragment of parchment with Mark, Chap. 6, of the sixth century A. D. A fragment of parchment with Acts, Chap. 23, and James, Chap. 1, of the fifth century, A. D. A leaf of papyrus with the fragment of an Onomasticon sacrum, of the third or fourth century, A. D. An early Christian private letter on papyrus of the middle of the fourth century. All the texts are represented in photographic fac-simile in the original size.

Adam. It was not in Adam, a local historical personage, that the Jews were interested, but in Adam the symbolic embodiment of universal humanity. The language used proves this: Adam is simply the Hebrew term, 'man.' This, too, is the meaning of the word in the most ancient language in Babylon, and also, according to Pinches, in the Phoenician and South Arabian texts. In Genesis i the word is never used as a proper name, but bears exclusively the generic meaning, 'man,' 'humanity.' In Genesis ii-iii, as is common in Oriental narratives, the personal and universal meaning interlink so closely as not to be easily separated. It is not wise to lay any great stress on the presence or absence of the article in our present Hebrew text, and therefore it is the narrative itself which must generally determine whether 'Adam' shall be translated 'man,' 'the man,' or as a personal name. But in any case the general meaning is clear. This is the Hebrew story of the origin of man given in the simple and primitive picture language so loved by Orientals."

THE TWO CONTINENTS.

That there was an early racial connection between the North American and Asiatic continents, and that the tide of migration moved from this country to Asia rather than in the other direction, as some have thought, is asserted on the strength of evidence collected by the Jessup North Pacific expedition of the American Museum of Natural History. This expedition, which was sent out at the expense of Morris K. Jessup, president of the

museum, has been investigating since 1897 the oldest remaining tribes of both continents, studying their customs, characteristics and languages, finding out how long each has occupied its present habitat and whence it came originally, and ascertaining the probable relationship of one to another. Says Daniel T. Pierce in "The Cosmopolitan":

"The favorite theory heretofore has been that the Indian came here from Asia. This theory is now upset. Many of those, moreover, who held that there was no relationship at all between the tribes of America and those of Asia have recently changed their views radically and now believe, as a result of the work of the expedition, that the Indian originated here and spread into Asia. Stewart Culin of the University of Pennsylvania is one of the converts. Mr. Culin has personally carried on extensive investigations. For a long time he denied that there was any connection between the tribes of the two continents. But at a recent congress of scientists he surprised all present by saying: 'I would like to state that I now withdraw from the position which I formerly occupied, that there was no communication between the two continents. I now feel very sure that some time in the remote past there must have been most intimate relations, and, furthermore, that the emigrations may have been, not from Asia to America, but from our own American continent to Asia and to the southern islands in the Pacific. Furthermore, I believe that the material which has been brought together will permit a demonstration to be made to you of this emigration in the long past and the establishment of the American continent, not as the source of an arid and sterile culture, as it is sometimes characterized, but of a living, vital force, which has gone out into the old world, and has affected the cultures of historic peoples with whom we are acquainted.'

"There are so many different tribes in Northwestern America and in Siberia, and they are separated by such vast distances that it did not seem probable at the outset that there was any close relationship between them. Each tribe has its own peculiar language and customs and is isolated from other tribes. Those who contended that there was nothing in common between the Asiatic and American tribes seemed to have considerable foundation for their assertions. But this was merely a superficial belief which arose from the lack of proper investigation. When the members of the Jessup expedition, after three years of exploration and study, compared notes they found that there was really a very close relationship between the Asiatic and American tribes. Not only do members of the expedition think that it has established this highly important fact, but they are inclined to believe that the tribes of both Siberia and Northwestern America were originally one race and that their culture was identical and sprang from the same source."

EDITORIAL DEPARTMENT

THE SAN FRANCISCO AND NEW MADRID EARTHQUAKES

The San Francisco Earthquake is described in the Popular Science Monthly for August by the celebrated geologist of the U. S. Geological Survey with illustrations which show the amount of displacement caused by the so-called fault. In the cuts we see the roads which were perfectly straight, moved so as to make a twenty feet off-set and fences of eight and a half feet off-set. The ground is lifted up on one side and ponds are left on the other. These are outside of the city. The street scenes show the effect of the earthquake.

The Century Magazine for August describes the same calamity under the title of the Heroic San Francisco. It gives pictures of the flames which devoured and destroyed what the earthquake had left. The pictures in this number of the Century Magazine are marvellous works of art. They present the city in flames and yet show the marvellous beauty of the buildings all of which, however, are in ruins. The lady who wrote this account, Miss Louisa Herrick Wall, speaks of the pluck and heroism of the people of the stricken city.

This calamity leads us to go back to the earthquake which occurred in the Mississippi Valley about a hundred years ago, 1811. The Popular Science Monthly for July has described this earthquake. New Madrid is on the Mississippi, and was at the time occupied by a French population. The earthquake came suddenly. The earth was so convulsed that no one could stand. The people saw the ground rise and fall as waves upon the sea. Trees interlocked their branches. Giant trees were split for forty feet up the trunk. Some of the openings in the ground were 31 feet wide and five feet long. Into these cracks rushed water from swamps and bayous. Trees were blown over by thousands at a time. The earth seemed to blow up coal, wood, sand with a roaring whistling sound. The atmosphere was saturated with sulphurous vapor, Gasses tainted the air for miles and affected the streams. It was along the Mississippi that the destruction reached its maximum. Tremendous boilings up of the waters and huge swells tossed the boats violently. Sand bars and islands gave way carrying with them the cottonwood trees, cracking, crashing and tossing around to and fro while they disappeared beneath the flood. The great naturalist Audubon witnessed the scene and wrote a description of it. He was riding on horse-back, he noticed that his horse stopped and placed one foot after another upon the ground with precaution as if walking upon a smooth piece of ice. Suddenly he began groaning piteously, spread out his four legs and stood stock still. The shrubs and trees began to move from their very roots. The ground rose and fell in successive furrows like the ruffled waves of a lake.

INDIAN RELICS DUG UP AT THE JAMESTOWN
EXPOSITION GROUNDS.

The romantic times of Pocahontas and Captain John Smith are vividly recalled by the Indian relics dug up in grading the streets at the Jamestown Exposition grounds. The site selected for the celebration of the three hundredth anniversary of the first permanent English settlement in America was once an English village occupied by the Powhatans, the most powerful tribes in the early American Indians, who roamed over the country east of the Ohio river three centuries ago.

Near the State Exhibits Building stands a majestic live oak tree, the Powhatan oak, estimated to be nearly 1,000 years old, which was a favorite camping ground of the Indians before America was discovered by the whites. Here were held councils of war when the only weapons in use were the stone hatchets, stone war clubs, spears with stone points and bow and arrows. The arrow heads used were made of flint, chipped down to a cutting edge, almost as sharp as a knife, every arrow head representing many hours of hard and patient work with the crude implements then in use. Scores of these flint arrow heads are being found on the Exposition grounds, in excavating for streets and buildings. Some of them are broken, many perhaps, having been broken by striking some foe of the Indians in battle or some wild animal. In those days the woods about Hampton Roads were alive with deer, bear and other animals, but it is most likely that these broken arrow heads came into contact with some human being, for at Sewell's Point, where these relics were found were fought bloody battles between the early English settlers and the Indians and, according to old Indian traditions, this point was also the battle ground on which warring Indian tribes desperately contended for the right of domain, long before the occurrence of the historic event which the Jamestown Exposition commemorates. The valuable fisheries of what are now called Hampton Roads and Chesapeake Bay, the beautiful hunting grounds along the water courses and the many attractions peculiar to this locality made this particular point of land very desirable, and for its possessions Indian tribes warred with one another. Now, after centuries have gone by and the old Indian nations that once controlled this region have passed away, their old battle fields have been transformed into magnificent international exposition grounds, just outside the corporate limits of the city of Norfolk, Virginia.

TATOOING AMONG THE MAORIS.

A loan exhibition which attracted a great deal of notice in the Guildhall Museum, is a collection of curios bearing on "Moko," loaned by Major-General Robley.

Now "Moko," it appears, is Maori for tatooing. "The finest tatooing on earth was that of the old Maori of New Zealand," says a card on the case which contains Major-General Robley's collection, and judging by some of the exhibited heads the statement is very true.

How any human being could bring himself or herself to undergo such an ordeal it is hard to discover. The process lasted three days, three days of chisel cutting, during which the beautiful spirals were chased all over the face and forehead and certain parts of the body.

Some compulsory "tatood" Europeans bear witness to its fearfulness. John Rutherford, a sailor, who, with five others, fell, in the year 1816, into the hands of the Maoris, relates that the pain was most acute; that while he bore it in silence, his companions moaned dreadfully, and it took him six weeks to recover completely, and three days to regain his sight.

But the queerest thing about this custom of Moko was that it led to a trade in well decorated heads. The Maoris seem to have had the custom of preserving the heads of their friends and relations in a mummified condition. These heads, with the beautiful tatooing on them, attracted the notice of curio hunters, and efforts were made to keep the supply up to the demand.

Wars were undertaken and old grudges revived among the tribes to serve this end, and persons who had artistically mokoed heads of relatives, took particular pains to hide them.

Maoris, with finely-decorated countenances, had to take very special means to elude head hunters, and chiefs tattooed their slaves to sell at literally so much per head.

Rev. J. Wood quotes a tale in which a certain chief pointed out a number of his people to a would-be purchaser, giving him a choice of heads, and assuring him that by the time he, the purchaser, came back his fancy would be ready.

The trade had its risks, however, for John Rowe, a certain white trader in these articles of vertu, fell, in the year 1813, into the hands of the relations of some fallen chiefs whose heads were in his possession, with the result that he was eaten and his head was carefully dried.

The Robley collection includes several of these heads—very fine specimens indeed; the tools with which the tatooing is done, musical instruments, and many examples of Maori carvings; also a very complete collection of drawings and photographs fully illustrating "Moko" in all its varieties.

BOOK REVIEWS.

ON HOLY GROUND. By William L. Worcester. Philadelphia and London: J. B. Lippincott Company, 1904.

This is a beautiful book, and one which will interest old and young. The cuts are very attractive. In fact, it is like traveling in the Holy Land to take the book and look at the illustrations. Some of these represent the objects and scenes which are very familiar, such as the pyramids, obelisks, statues, temples and halls of Egypt, also the arches and streets and fountains of Jerusalem; the ruins of Baalbeck; the ancient temples of Babylon. Others not so familiar. Among these are the bridge over the Hasbany river; the two ruined columns at Tyre; a view of Lake Wercon, also the valley of Hinnom, the valley of Jabbok, the meadows of Galilee, the ruins of Chorazin, the spring on the Jericho road, the flowers on the Mount of Olives, a flock of sheep by Lake Merom, Lepers by the wayside, an old aqueduct at Jericho, the olive tree in the garden of Gethsemane.

The descriptions are arranged in chronological order, beginning with the creation and the garden of Eden and the flood, and scenes of life in Egypt, a view of the Pharaoh of the Exodus, a description of Mt. Sinai and of the desert of Elim are followed by an account of Balaam's blessing, with a cut to show the High Place and many other events.

The crossing of the Jordan is illustrated by a map and a picture of the Jordan. This is followed by a view of the plain of Jericho and Elisha's Fountain. The divisions among the tribes is illustrated by pictures of Mt. Tabor, the plain of Sharon, Mt. Gilboa and a view of Samaria. The story of Samuel is attended with a picture of Shiloh. The story of Saul and Johnathan is attended by a picture of Michmash and Geba. The story of David and Solomon are attended by pictures of Bethlehem and Solomon's Pools. The story of Saul and David is illustrated by a picture of the wilderness and of the tombs. The story of the Queen of Sheba is illustrated by a picture of camels in a desert. Elijah in the wilderness is associated with mountain scenery, and a view of the Jordan. Elisha's home in Shunem brings to view the chamber on the wall. Naaman and the eastern gate of Damascus are associated together. The captives in Babylon mourn for the walls of Jerusalem as a resting place. The old and the new walls are brought to view.

The story of the birth of Christ is illustrated by many pictures, viz: A picture of Bethlehem, Rachel's tomb, the Worship of the Wise Men, the Flight into Egypt, Christ before the doctors, a view of the Jordan and a street in Bethlehem. The

teachings of Christ and his miracles are illustrated by a view of Cana in Galilee and Jacob's well, the pool of Hezekiah, the village of Magdala, the sea of Galilee and the pictures of Bethsaida.

LIFE AND MATTER. By Sir Oliver Lodge. 175 p. A criticism of Professor Haeckel's "*The Riddle of the Universe*." Published by G. P. Putnam's Sons, New York and London: The Knickerbocker Press.

The author thinks his book is an antidote against Haeckel's speculative and destructive notions.

He says that "a philosopher should aim at being all-inclusive; before everything a man of science should aim at being definite, clear and accurate, and rather criticises Haeckel for attempting to do both.

Lodge objects to "life" being included in the category of energies.

In his chapter on "The Law of Substance," Lodge states the hope that in certain experiments "now being conducted," the law of conservation (indestructibility) of matter, may not be found to be true. He says that "destruction and creation of matter are well within the range of scientific conception." There is no evidence of such an idea at the present time.

The author, it appears, is a physician, and not a biologist, and certainly forgets that whatever subdivisions of matter into atoms, divisible into various electros or other more minute subdivisions, is no evidence whatever that matter is destructible; a recent notion that matter is a multiplex of energies, has no evidence to support it, and reputable scientists have no respect for such an idea.

He says that the nature of life is unknown. Possibly this is true to the physicist, but no reputable biologist will make such a statement, neither will the physicist admit that the nature of electricity is unknown, for most scientists agree that energies are known by their manifestations through matter. Lodge disagrees with Haeckel in thinking that matter possesses the attributes of life, mind and consciousness, and holds psychology to be a spiritual, non-material, and not a physical, material science, yet he states elsewhere that matter is the instrument and vehicle of mind.

Lodge declares that life is not a form of energy, and also that it is not included in our physical categories. It is included in our biological categories, however. He thinks that life is neither matter nor energy, but is dependent on matter for its phenomenal appearance, and conjectures that it is subject to a law of evolution, whether in its phenomenal or occult state; he says that all life which is temporarily associated

with matter, as in plants and animals, shall exist after death.

Lodge says that Haeckel is wrong in his notions as to the origin of living forms on the earth, for the earth was certainly hot and molten and inorganic, apparently he has not heard of the new accretion theory; he therefore thinks that life came from somewhere, displays itself amid terrestrial surroundings, and then disappears or evaporates to whence it came.

It is very certain that this book will serve to advertise "The Riddle of the Universe" by Ernst Haeckel, and both books will have their influence, according to the bias and experience of the reader.

The subject matter is of special interest to the biologist and religionist who may or may not be interested in the life sciences.

W. R. MITCHELL,

Chicago, June 9, 1906.

HISTORY OF THE UNITED STATES AND IT'S PEOPLE. Earliest Records to the Present Time, by Elroy McKendree Avery in Twelve Volumes. Cleveland, Burrows Bros. 1904.

This is a very valuable work and is splendidly illustrated. It is in fact just such a work as has been needed for a long time. The descriptions are good, the style is interesting, the chapters are short, and the illustrations are appropriate and instructive. They make the history more vivid and bring the scenes of the past before the eye. The work begins with the mythology of the natives, then passes on to the story of the Norsemen. The second volume begins with a description of Champlain and New France, and then passes on to the colonial system and the history of the early settlements of Jamestown, Manhattan and of the early history of the Pilgrim fathers and their settlement at Plymouth and Massachusetts Bay. A history of the old Dominion follows this. Next comes the Pequot war, the troubles in Massachusetts between the Puritans and the heretics. All of these chapters are abundantly illustrated so that we are made familiar with the scenery, the style² of the first houses, the appearance¹ of the natives, the wild animals that prevailed, the kind of clothes that were worn, even the coin that was common. The maps also bring before the eye the progress of settlement and the very appearance of the country. The book is attractive and interesting. The style of the writer is excellent. The work cannot fail to interest the American public.

THE PHILIPPINE EXPERIENCE OF AN AMERICAN TEACHER. A narrative of work and travel in the Philippine Islands By William B. Freer, New York, Charles Scribner's Sons, 1906.

The object of this book is to show that the Philipinos, notwithstanding some of their desirable traits, are not fitted for self government. In order to show this, the author describes his travels in Northern Luzon; at the beginning of his work; he describes the Igorotes and their customs. Then he describes the conditions in southern Luzon, the awakening in Camarines, also the Tagalogs, names which were quite familiar during the war with the Spaniards. He also describes his vacation travels. He says to the American teacher with his annual ten weeks vacation a vast field for interesting travel presents itself near at hand. There are trips of a hundred miles into the interior of China, also to Canton, Hong Kong and Peking and the coasts of Borneo. The tours of Japan in themselves are a liberal education and the travels in the Philippines furnish interesting excursions.

The book contains seven full-page plates, representing the houses, the scenery, the schools and the natives.

THE DEVELOPMENT OF PALESTINE EXPLORATION. By Frederick Jones Bliss, PH.D. New York: Charles Scribner's Sons, 1906.

The dawn of exploration began with Polybius and Diodorus Siculus. It continued with Pliny and Tacitus. A Christian pilgrimage took place A. D. 533. Paula made a pilgrimage in 382 A. D. Arculf visited Palestine about A. D. 615. Bernard made one in 870 A. D. An Arab geographer published a map in 1285. The first crusade opened up the Holy Land to Europeans. Guide books appeared in the twelfth century. Theoderic described the holy places; Benjamin of Tudela is an excellent authority for this period. The monk Burchard or Brochardus, furnished the first mediaeval map in the fourteenth century; Marco Polo began his travels; the holy land was the center of the universe; four maps have been preserved from this period; Sir John Mandeville in 1357 traveled through Tartary, Persia, Chaldea and Armenia; Pococke in 1743 prepared magnificent folios; Laborde in 1828 brought up the subject to the time of Robinson, who is the great authority on the geography of Palestine. Renan filled the gap between the time of Robinson and the establishment of the Palestine Exploration Fund; Lynch explored the Dead Sea in 1848; the Recovery of Jerusalem was published in 1870; Western Palestine was explored by Wilson and Warren; Professor Palmer traversed the desert of the exodus; Captain Conger in 1872, Guineau in 1873; Sir Walter Besant

became the secretary of "The Fund;" Dr. Flinders Petrie began Egyptian research; the American Palestine Exploration was established in 1870, but was soon abandoned; no society of the kind now exists in America.

Such is the general review of the exploration of Palestine. But the work which was accomplished is more important than the names or dates. From the time of the Monk Bernard, and the period of the crusades, we have material furnished by the Arab and Persian historians. Much attention is paid to mosques, but the holy sepulchre is incidental; after the crusades the holy land was under christian rule. Jerusalem, Bethlehem, Shechem and Nazareth came into prominence. A church of the holy sepulchre was visited; the crusading churches and castles became prominent, then the travels of Sir John Mandeville was translated into Latin, English and several other languages. Traveling afterward became dangerous; Pococke went from Jaffa to Acre by sea; the antiquities of Beyrout were described by Maundrell. The site of Petra and the peninsula of Mt. Sinai became known in Burckhardt's day. Dr. Robinson was equal to Renan in his accuracy and skill in locating places. His Researches are authority even now. The missionary Thompson made the geography of Palestine popular, and it has become a favorite place for sight seers as well as geographers.

LUMINOUS BODIES HERE AND HEREAFTER, by Charles Hallock, M. A. Member of Washington Biological Society, New York. Metaphysical Publishing Co.

The author of this book, goes back to the days of Abraham, and to the time of the astrologers, to prove that astral bodies, and soul luminosity were objects of thought, and belief. It is singular, however, that so little progress has been made and that no more is known now than then. We have no more evidence of the substantial material character of the next world, than Columbus had before he discovered the new world. The Greeks taught the immortality of the soul, St. Paul speaks of the spiritual body. The soul retains its individuality even more now than formerly. but it is difficult to discover what the future body will be. The author says: "I believe that heaven is not only a serene mental condition resulting from man's own consciousness of right ("the spirit within him beareth witness"), but also an actual place where the Intellect is divested of its own carnal envelope, and receives a new body which I am bold to assume, is "electrically luminous" effulgent with the visible glow of the beatitudes. "This is a materialities view, and very different from that which is presented in the scriptures. There may be such a thing as a "soul light" but it is the light which the spirit gives to the countenance and

not any electric power or luminosity of matter. It seems strange that the effect of the soul and the spirit should be so often forgotten, and so many materialistic ideas should be advanced.

HAWAIIANS' YESTERDAYS By Henry M. Lyman, M. D. Chicago: Chapters from a boy's life in the Islands in early days. With twenty-seven illustrations and two maps. A. C. McClurg & Co. 1906.

This is a beautiful book and through the letter press and illustrations brings before us the scenery of the Hawaiian Islands. At the same time it shows the state of the islands during the time of the early missionaries. The cuts represent the Hawaiian villages with a volcano in the back-ground, The cloud scenery is also brought before the eye. The modern view of Hilo is not so impressive as the natural scenery in its wildness, nor so suggestive as the view of the missionary addressing the natives at the Missionary Seminary. Henry M. Lyman, the author of the book, was a son of one of the first missionaries, and his descriptions carry us back to the days when Rev. Daniel Dole and the Gulicks were beginning their work. Honolulu was the landing place for vessels from all parts of the world, so that the sons of the missionaries became familiar with the officers who were in command, from every nation. The natives were a simple folk and had primitive tastes, but were not utterly degraded for religion had taken possession of their lives even before the arrival of the missionaries. The author of this book was born on the islands and is familiar with its history from the beginning.



LAFAYETTE'S HEADQUARTERS, WILLIAMSBURG, VA.



CHURCH, NORFOLK, VA.

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BENN CHURCH, NORFOLK, VIRGINIA.

Within a short distance from Norfolk, Va., near the road to Suffolk, in the depths of the forest, stands an ancient church in partial ruins, which is known locally as the Benn Church. It is alike an object of interest from its secluded situation and its great antiquity. There is evidence to the effect that it was built in the reign of Charles I, between the years 1630 and 1635. Tradition states that it was the second church erected in Virginia. It was used by Nathaniel Bacon as his headquarters during Bacon's rebellion. The timber is English oak and was framed before shipment. The whole structure was built in a most substantial manner and the woodwork today, where it has not been exposed to the weather, is perfectly sound and the mortar sufficiently hard to strike fire when in collision with steel. The structure is of brick, has a lofty tower and is in a good state of preservation. Its walls are overrun with a delicate net work of vines.

In its day it was a splendid edifice. One window was composed of colored glass, representing scriptural subjects. Originally, it was, of course, an Episcopal church, but after the revolution it was temporarily occupied by a sect called Okellyites. The Jamestown Exposition, to be held at Norfolk, next spring has given a wonderful stimulus to the study of Virginia antiquities and one of the results will probably be the restoration of this interesting church for the benefit of generations as yet unborn.

The most historic structure in the city of Norfolk, Va., is old St. Paul's Episcopal Church, erected in 1793, twice fired on by the British, and still retaining embedded in its walls a shell fired by Lord Dunmore's fleet, January 1, 1776.

St. Paul is a beautiful structure both as to interior and exterior. It is profusely covered with ivy and its spacious and shady

church yard contains the tombs of many of Norfolk's early citizens of note. It is the first landmark usually sought out by visitors to this part of Virginia, who view with great interest the cannon ball fired by the treacherous and execrated Dunmore.

St. Paul's has been kept in an excellent state of repair and is the leading Episcopal church of Norfolk. It possesses a fine organ, and boasts of a surpliced choir.

THE PIASA.

Although the United States has no folk lore of its own, such as is possessed by Germany, Sweden, Denmark and other countries, its primitive history abounds in Indian legends and stories that are full of romance, tragedy and adventure.

The Indians of early days were imbued with a certain kind of religious faith, to which they adhered with all the tenacity of their race, and certain symbols, signs and painted languages were pregnant with significance. The Great Manitou was their god and the happy hunting grounds their heaven, and their teachings were as sacred to them as the Christian religion is to us to-day.

One legend was as follows:

Many thousand moons before the arrival of the paleface there existed a bird of such dimensions that he could easily carry off in his talons a full-grown deer. Having obtained a taste for human flesh, from that time he would prey on nothing else. He was artful as he was powerful, and would dart suddenly and unexpectedly upon an Indian, bear him off into one of the caves of the bluffs and devour him. Hundreds of warriors had attempted for years to destroy him, but without success. Whole villages were nearly depopulated and consternation spread through all the tribes of the Illini.

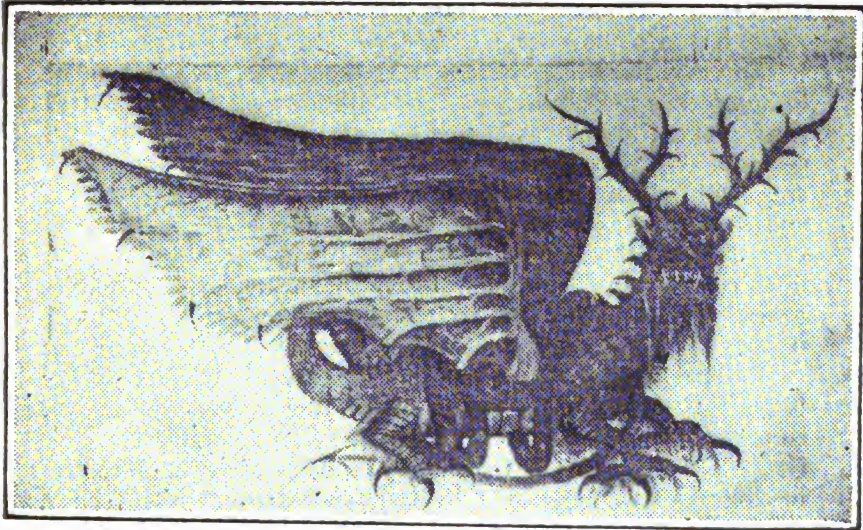
Such was the state of affairs when Ouatogo, the great chief of the Illini, whose fame extended beyond the great lakes, fasted in solitude, separating himself from the rest of his tribe for the space of a whole moon, and prayed to the Great Spirit, the Master of Life, that He would protect His children from the Piasa.

On the last night of the feast the Great Spirit appeared to Ouatogo in a dream and directed him to select twenty of his bravest warriors, each armed with a bow and poisoned arrows, and conceal them in a designated spot. Near the place of concealment another warrior was to stand in open view as a victim

for the Piasa, which they must shoot the instant it pounced upon its prey.

When the chief awoke in the morning he thanked the Great Spirit, and returning to his tribe told them of his vision. The warriors were quickly selected and placed in ambush as directed.

Ouatogo offered himself as the victim. He was willing to die for his people. Placing himself in open view on the bluff he soon saw the Piasa perched on the cliff, eyeing his intended prey. The chief drew up his manly form to its utmost height, and, planting his feet firmly upon the earth, he began to chant the death song of an Indian warrior. A moment after the Piasa rose into the air, and, swift as a thunderbolt, darted down upon his victim. But scarcely had the horrid creature reached Ouatogo when every bow was sprung and every arrow was sent quivering to the



PAINTING OF THE PIASA BIRD NEAR ALTON.

feather into his body. The Piasa uttered a fearful scream that sounded far over the opposite side of the river, and immediately expired. Ouatogo was unharmed. Not an arrow, not even the talons of the bird touched him. The Master of Life, in admiration of Ouatogo's deed, had held over him an invisible shield.

There was the wildest rejoicing among the Illini, and the brave chief was carried in triumph to the council-house, where it was solemnly agreed that, in memory of the great event in their

national history, the image of Piasa should be portrayed upon the bluff.

Such is the Indian tradition. It is a matter of fact that the image of a huge bird was painted on the rock.

It was some twenty or twenty-five feet long and seven or eight feet high. A dark red was used, which was very durable, the outlines and especially the wings, strongly marked with heavy horizontal lines, being plainly visible as long as the rock was left in place, while the other portions in a lighter tint gradually became indistinct.

As long as it remained there, an Indian never passed the place in his canoe without firing his gun or arrow at the figure, and the face of the bluff was covered with the marks of their missiles.

The image of this monstrous being was painted on a rock located near the City of Alton, Ill., on the banks of the Mississippi river. This rock has since been destroyed, and the place where it stood is now occupied by Chautauqua grounds.

Through the center of Alton in those days flowed a quiet little stream called the Piasa. Some distance up its course was a cave, shunned alike by old and young, for about its dark recesses hung fearsome tales of what might be found therein. Bones and skulls of man and beast, it was said, were scattered about, and strange, weird cries and groans issued at night from its depths. Great shadows gathered about it and vegetation drooped in its vicinity. In the memory of the white man none could tell its gruesome past, but the Indian braves, once possessors of all that region, had preserved the marvelous legend which is here given.

In descending the river to Alton the traveler will observe between that town and the mouth of the Illinois a narrow ravine, through which a small stream discharges its waters into the Mississippi. This stream is the Piasa. Its name is Indian and signifies in the Illini language "the bird which devours men." Near the mouth of this stream, on the smooth and perpendicular bluff, at an elevation of some fifty feet or more, was painted the figure of a monster with its wings extended. The being which this figure represented was the Piasa bird. From that painting was derived the name of the stream.

Francis Parkman, in his "La Salle and the Discovery of the Great Northwest," thus describes the Piasa bird as it appeared to Marquette and Joliet during their voyage down the Mississippi river, but speaks of two pictures instead of the one familiar to old residents of Alton:

"Again they were on their way, slowly drifting down the great

river. They passed the mouth of the Illinois and glided beneath that line of rocks on the eastern side, cut into fantastic forms by the elements and marked as 'The Ruined Castles' on some of the early French maps. Presently they beheld a sight that reminded them that the devil was still lord paramount of the wilderness. On the flat face of a high rock were painted in red, black and green a pair of monsters, each as large as a calf, with horns like a deer, red eyes, a beard like a tiger and a frightful expression of countenance. The face is something like that of a man, body covered with scales, and the tail so long that it passes entirely round the body, over the head and between the legs, ending like that of a fish. Such is the account which the worthy Jesuit gives of these manitous or Indian gods. He confesses that at first they frightened him, and his imagination and that of his credulous companions were so wrought upon by these unhallowed efforts of Indian art that they continued for a long time to talk of them as they plied their paddles."

Two paintings of the Piasa bird are known to be in existence to-day. One of them is owned by Dr. Marsh of Alton and the other is in the possession of the Alton public library. The accompanying photograph is from a pen and ink sketch made some forty years ago by T. F. Ladd of Whitehall, Ill., which has never before been published, and gives a good idea of the popular conception of this frightful monster. The legend of the Piasa has been written in poetry as well as in prose.

It is a comment on the commercial spirit which prevails that this and nearly every sign of the poetry and mythology which prevailed among the Indians has been swept away and even the mounds and earthworks are rapidly disappearing.

THE MESA VERDE NATIONAL PARK.

BY EUGENE PARSONS.

On June 21 Congress passed the bill creating the Mesa Verde National Park. By the provisions of this act the region in South-western Colorado containing the Cliff Dwellings is to be set apart as a government preserve, under the guardianship of the Department of the Interior. The object of the bill, which has become a law, is the preservation and protection of the famous group of prehistoric buildings in Mancos Cañon, Montezuma County. A part of the Southern Ute Reservation is included in the park. Not only the architecture, but relics of various de-

scriptions will be guarded against spoilation by tourists and others. The commission having charge of the park will also care for the ruins found within five miles of the park boundaries.

Southern Colorado is not the only field for investigation along these lines—Utah, Arizona and New Mexico are rich in ruins. In some instances they are falling to pieces and decaying beyond repair. In the summer of 1904 the writer took a trip to the crumbling remains of a once populous pueblo situated near the town of Aztec, N. M., some forty miles south of Durango. A resident of the place told him that not long ago there were forty-five hundred chambers in these underground habitations. Now, many of the roofs have fallen in the passages are choked up, and the visitor goes away disappointed. The pottery and implements dug up in the ground have been scattered. Residents of the town have made valuable finds, but it is only by their courtesy that the visitor is able to see these interesting relics of a bygone age.

The task of recovering and preserving American antiquities is too arduous for private individuals—the government should undertake it, and the finds should be stored in accessible museums. The museum in Colorado's capitol is a priceless collection, and other treasures await the spade of the archaeologist. Travelers and excavators in Mexico and Central America have discovered the fragments of temples and cities belonging to an extinct civilization. Scattered here and there in our own land are monuments of a people who were contemporaries of Montezuma.

Hitherto Westerners have been too busy making a living and getting rich to bother their heads much about cliff dwellings and cave homes, but the time will come when men and women will feel a curiosity to know something of the prehistoric past of the Southwest. Here is a great field for original investigation. Those who are intellectually equipped for the work are not numerous. The harvest is great, but the laborers are few. Research along these lines should be encouraged and promoted, and it is to be hoped that government supervision of the Mesa Verde Park will facilitate it.

EGYPT UNDER THE EARLIER DYNASTIES.

The discoveries of recent years in Egyptian archaeology have greatly increased our knowledge of the geographical extent of Egyptian dominion and influence in Western Asia under the earlier dynasties. This additional information has chiefly been derived from the closer attention paid to all remains of hiero-

glyphical inscriptions in the Sinaitic peninsula, as well as from a re-investigation of all known texts upon monuments and papyri, referring to lands or peoples east of Egypt proper.

The reliefs of the Pharaohs Zosiri-Noutirkha and Sanakht* of the First Dynasty, near Sinai, carry back the date for Egyptian expeditions to that region far anterior to the era of Senerferon and the "pyramid kings"; whilst the fact that the Fifth Dynasty monarchs conducted campaigns in Syria is proved by the inscription in the tomb of Anti at Sakkarah, and for the Sixth Dynasty by that Quini. He calls the Asiatics Amou and Hirashu, names they bore at times through all Egyptian history.

The new discoveries, however, to be particularly alluded to concern 12th dynasty inscriptions, one of them a memorial of a certain Khonsovkou, found by Mr. Garstang in 1900; and two others persons named Ptah-ourou and Sinefrut, were discovered at Sarbout-el-Khadim in the Sinaitic district, and which give further information of a hitherto unrecorded Asiatic expedition under Usirtasen III.; also of Egyptian officials being at the Sarbout-el-Khadim mines under Amenemhat III.

But the new texts disclose a more interesting fact than these, and that is that the Egyptians were well acquainted with three tribes mentioned in the geographical and ethnographical list in Genesis 36. These are the Lotan, or Lotanu, the Horites and the Aiah, and further, they connected them together geographically and racially as does the Old Testament.

The first of these important inscriptions records a war waged against the country of the Sakimim, and the tribe, or people, of the Lotanu who were encountered during an expedition to the land of Monitiou-Sati, which in early Egyptian times signified near Asia, or rather South Syria. Immediately the text was deciphered it confirmed the supposition of Professor Max Muller that the people read as Tanou upon the celebrated Berlin papyrus of the XII. dynasty, containing the travels, or adventures, of Saneha, should be read Lotanu.

He speaks of two districts occupied by them as Lotanu, simple, and Higher (or Upper) Lotanu. The inscription of Senefrit mentions a chief, or sheikh, named Khebta, or Khebtata, who, he says, was a brother to a king of the Lotanu, and this Sinaitic prince was evidently an ally, if not even an official, of the Egyptians, for his name appears in several lists of their officers and overseers. Whether he served as guide to their parties or was awarded a post among the staff of the Egyptian colony at Sarbout-el-Khadim in order to conciliate his countrymen, is un-

known. It will be seen that these monumental records and the 'Saneha papyrus all assign Lotanu to the Sinaitic district in "Middle Empire" times. It is very singular that in later times, for instance under the reign of Thotmes III., upper and lower Lotanu signified regions away in Palestine and North Syria. But this corresponds to the frequent enlargement, or projection rather, of the name for a neighbouring district to a further district as the geographical knowledge of the nation using the title, to denote a frontier territory expands. As Palestine, Greece and Germany gradually embraced more extended boundaries so to the Egyptians. Lotanu was at first close to their eastern frontier. As their conquests extended further into Asia the name was applied to countries further away.

As M. Levy remarks, it is evident to us, now that we have more texts to guide us, that primarily Lotanu was the part of the Sinaitic peninsula bordering upon the Pharaonic mining colonies, probably upon the Syrian or Palestine side of these. In fact, the desert between Palestine and Egypt, with the hills and the valleys of which Sarbout-el-Khadim was one, was situated within its area.

In the time of Saneha, he, having penetrated further into the valleys and oases in which the Lotanu lived, projected part of their domain to a more distant position, and so writes of a higher Lotanu to the north toward Palestine.

As time rolled on the Egyptians applied the name, perhaps merely for want of knowing better, to other areas until under Thotmes III. it was at times used as a designation for southern and northern Syria, or as M. Levy further says, they first placed it at the fortress of the Semitic people on the threshold of Asia away from the Mediterranean toward Sinai, and finally transferred it to all the hinterland of the Palestine plateaus and central Syria. As mentioned, these early monuments, in addition to the Lotanu, speak of the Horu, or Horites, as contiguous to each other. This second race's district at a later epoch was transferred to the Syrian shore, for the Golenischef papyrus calls the Mediterranean near to Byblos, or Gebal, the sea of Hor. This teaches us that Hor represented to the Egyptian at the greatest period of their territorial aggrandisement the Shephela of the Hebrews. In Egyptian documents up to the 19th dynasty it also signified a district close to the Egyptian frontier near the Sinaitic region.

For instance, Seti I. says that in proceeding from Zaru, a place near the modern Imaeliyeh, to Kanana he passed through

the Horite territory. Therefore it was, at this epoch the northwest angle of the Sinaitic district commencing at Zaru, the "gate of Egypt," and stretching by the time of Thotmes III. if not in that of Seti II. as far as Gaza. In fact about 2000 B. C. Horu and Lotanu were between South Palestine and Sinai, projecting somewhat into each, and were not many days' journey from the Egyptian Delta. . . .

This agrees very well with Genesis 36:20-30, where Lotan is labelled as "first born of Seir," a people, or district, lying between South Palestine and the Arabian Gulf. Horu is a son of this Lotanu, and, like all nomadic patriarchal people, pushed out from the Lotanu area into further fields and pastures, occupying according to Egyptian evidence the districts west of the Sinaitic region, toward Gaza.

It is evident that the Egyptians have in their Sinaitic inscriptions faithfully transcribed the local tribal names, subsequently using these ethnic titles as geographical ones. This is further confirmed by the fact that Saneha mentions Aiah in the Bible, the nephew of Lotan (see Genesis 36:24), and also either Qodem, or Adema-Edom; the correct reading of these two names is still undecided. Saneha speaks of the Aiah as an oasis famous for its vineyards.

It is certainly remarkable that the two names of Asiatic neighbours to Egypt previous to the new Empire should be found in Genesis 36, and that a little later these under the 12th dynasty should be associated in a papyrus with a third Biblical name; all these three being in the Old Testament records placed in the regions between Palestine and Egypt, and the proof of this should be forthcoming as soon as ever Egyptian texts situated in the proper region beyond their frontier where they might be anticipated, are scientifically examined. Of course there are scores of the Biblical places and peoples also mentioned upon other later Egyptian records.

As has been explained, the names of Horu and Lotanu were subsequently made to embrace regions far distant from their original sites, the Horu being carried away to part of Phoenicia and the Lotanu to Syria by the date of the Decree of Canopus in Ptolemaic times. (**

JOSEPH OFFORD.

THE RELIGION OF ISRAEL.

BY THE REV. W. H. JONES.

Professor George Adam Smith of Glasgow, in his lectures delivered at Ohio Wesleyan University during the last week of May, shows completely that the scholarship and research of the last thirty of forty years give a new apologetic, in that they prove from a new point of view a real, authentic revelation of God in the Old Testament.

"Some of the Origins and Elements of the Religion of Israel" is what he calls the course. He describes the racial stock from which Israel sprang,—namely, the Semitic,—offers proof that such was Israel's origin, tells of the human instruments which God used in the long, gradual revelation of himself to that people, and points out some of the often unnoticed signs of the Spirit of Christ in the earlier portions of the Old Testament.

We ought to compare Israel, not with Greece and Rome, but with her own kinsfolk, the Arabs and other members of the Semitic race. The record of the life of the race, from 900 B. C. down to the present day, is clear and authentic. It was the desert that moulded the nature of the people. It impressed upon them qualities that may be summed up by four paradoxes. 1. The Semite is of great sensual grossness, with equally great reverence. 2. He has remarkable subtle, but no originality or power of sustained speculation. 3. He combines a very distinct subjectiveness with realism in style. 4. His remarkable capacity for endurance and resignation is broken by sudden fits of ferocity and passion.

How it illumines the imprecatory psalms to remember that it was the enforced long fasts of the children of the desert that brought forth rancor and fanaticism; that these psalms were written by the hungry sons of starved ancestors, who at length became starved for righteousness, hungry for the deferred justice of God!

The Semite was naturally religious. His easy detachment from the things of sense, his capacity for forgetting self, his patience, and zeal to fanaticism, all help in this. Was the Semite naturally monotheistic? This starts the question, Is there in the Old Testament a distinct divine revelation? Renan's famous theory is now totally overthrown. The Semites, wherever found,

were unmistakably polytheists. Israel herself long held to the reality of many gods (see the Second Commandment, and also Deut. 4:19). Her adherence to her own tribal god offered the foundation upon which the one true God built her progress to a grasp of the reality.

It was not the intellectual or political influences that turned Israel out of polytheism to monotheism, the only Semitic tribe that did so emerge. It was the character of Israel's God, revealing himself in the great men of the nation and in the crises of our national life. The popular standards of morality in those early days were based on the normal life. The sacred relation was that between father and son. Justice was equivalent to tribal interest. Loyalty to blood and shame before family or friends were the only means on morality's side. These traits were reflected in their thought of God, who seemed to them a glorified chief, with his interest only in social duties, not in the inner character.

What made Israel what it became? Not any external influence. Not Babylonia, for it was polytheistic to the core. Not Egypt, for the religion and ethics of the Pentateuch, according to Renouf and Kuenen, show not a trace of Egyptian influence, save, perhaps, in a few sanitary regulations.

Jacob was the typical Semite of old,—one who will wear well, eat and dream. The tradition of the primitive Canaanites' excess of size over the invaders, supported by the representations on Egyptian monuments and by the present disparity between nomad and inhabitant of Palestine, argues for Semitic origin. Very much of the religious equipment, like the ark and the sacrifices, was held in common with all Semites, and was called by the same names.

The early manifestations of God came to Israel through the storm, as was true of their kindred. They all employed the same names for him, and all made the same use of him. Compare the account of the campaign recorded on the Moabite stone with that of Joshua's taking of Ai. The similarity is striking. The Semite had no belief in immortality; neither had Israel. Abraham and his descendants are, of course, familiar with death, but in all their tender elegies there is no hope of joyous, rich life beyond the grave. Thus the body of Israel's religion is Semitic in stock and fibre.

Revelation came to Moses in the desert. The revelation was authentic, genuine, supernatural, but the religion which was the vehicle of that revelation was Semitic in ritual, intellectual

conception of the Deity, and everything else. Revelation in history is a thing of gradual growth; and even in the culminating period, when Almighty God emptied himself and became a man, his teaching must be a condescension to man's weakness.

So at the beginning of Israel the symbols and rites, the ideals and notions through which they had met God before were the channels of the new grace. He could not have flashed out upon them the fulness of his perfection, for that would have been to forsake and violate all his own ways of dealing with his children. Further, if God in those days were to be connected with a tribal God at all, it must have been with the accompaniment of a tribal morality. The steady progress thenceforth was due to the ethical spirit, not to a body of laws; for these were the result, not the cause,—indeed, they were the precipitate,—of what the prophets attained.

Revelation is no uttering of words or writings, but the unveiling of God's character, by whatever way.

Now to consider the human means of the revelation to Israel. In trying to learn the will of the Deity, all peoples have used soothsaying and ecstasy, external and internal modes. The name "prophet," as everybody knows, comes from the Greek,—a person who speaks for God. The early prophet in Israel was largely a soothsayer, using the lot or other outside means for his work. Compare the detection of Achan.

Even the soothsayer had a noble opportunity to grow morally, and from his position of influence to lift up the people.

Balaam is a fine example of the seer who throws himself into a frenzy to win the power of vision. He is the bridge from Semitic to Israelitic prophecy. Summoned for pay to curse a nation, he employs all the customary devices to follow Balak's wish, and says to his employer, "I cannot go against Jehovah." Now that he realizes that the real character of God, or God's plan for Israel's future; but this spirit overbears the selfish motive and the fear of the king. There is something grand about this poor, excited slave, groveling there, and feeling that this spirit is above the king of the earth. Some day that same humanity will stand on its feet, and hear its Lord say, "Henceforth I call you not slaves, but sons."

After much employment of the divine art in well-known instances in the career of Moses, Samuel, David, and Solomon, the second form, or ecstasy, crowded out the first, those thus divinely frenzied were grouped in companies. It is to the glory of Samuel that he realized that there was a force which might be

applied for the quickening and elevating of the national life when it was in sore need of just that renewal.

Soothsaying in Israel owed its purity and progress to constant association with the national life and to loyalty to the tribal God. God was practical, moral, desirous of keeping the national life clean and healthy. Those who in our day are turning to Spiritualism and the like, for a short cut to the Unknown, should be told that a capable people tried that experiment thoroughly long ago, and cast it aside as not only worthless, but demoralizing.

In seeking the spirit of Christ in the Old Testament, men used to confine their efforts to typology or Messianic prophecy. As usually treated these are too narrow or too wide. It is the abiding sinfulness of pulpit rhetoric to run typology into the ground, seeking to flatter our Lord by strained examples of foreshadowings, forsaking Calvin's fine saying that we honor Christ only when we bring him *quid solidum*. From first to last, we must remember that the main factor of Israel's religion was the character of its god. Matthew Arnold, like Renan in writing the history of intuition, made a tremendous error in supposing that the essence of the Hebrew conception of God was righteousness. Most emphatically it was not this, but it was love.

In the song found in Deuteronomy 32, the whole relationship described as existing between Jehovah and his people is that of the tenderest affection. What could be more beautiful than the lines, "As an eagle stirreth up his nest (the father bird, not the mother, as in our version), fluttereth over his young, spreadeth abroad his wings: so Jehovah alone did lead them (that is, Israel), and there was no strange God with him!"

The song of Deborah is the earliest authentic document of the Old Testament. In this, Jehovah's people are called lovers. It shows the passion of the people for the God who had redeemed them.

The teaching of our Master warrants us in repudiating plainly the savage exultation by one woman over the treacherous murder of a defeated foe by another woman, but even that must not blind us to the magnificent virtues of the song.. The splendid scorn of the recreants who preferred comfort and material prosperity to self-sacrifice for the nation, the glorious praise of those who "jeopardied their lives unto the death,"—what could be finer?

"By war did I redeem you." Ah, yes! it was by the call to fight that he redeemed them. The battlefield was the Golgotha of early Israel. There Zebulun and Naphtali laid down their

lives for the brethren. "Thy gentleness hath made me great." The heroism, the self-sacrifice, the loyalty to the nation and Jehovah, were the warriors' response to the patience and love of God. Was not this element an obvious manifestation of the Spirit of Christ?

Take David, most widely beloved by all the men of the Old Testament. Admit that he had many of the vices to which an Oriental monarch is tempted. He was ambitious, cruel, subtle, shifty, and at times swept away by passion. Withal he had charms of character and person that were irresistible. (The tradition telling of blood-thirstiness on his death-bed is late and unreliable). How he wins over his enemies! A foreigner, Ittai, pledges life long devotion. Magnanimous again and again is he to the furious Saul. How great hearted in exile, how regal in the episode of the three mighty men breaking through the host to fetch water from the well at Bethlehem!

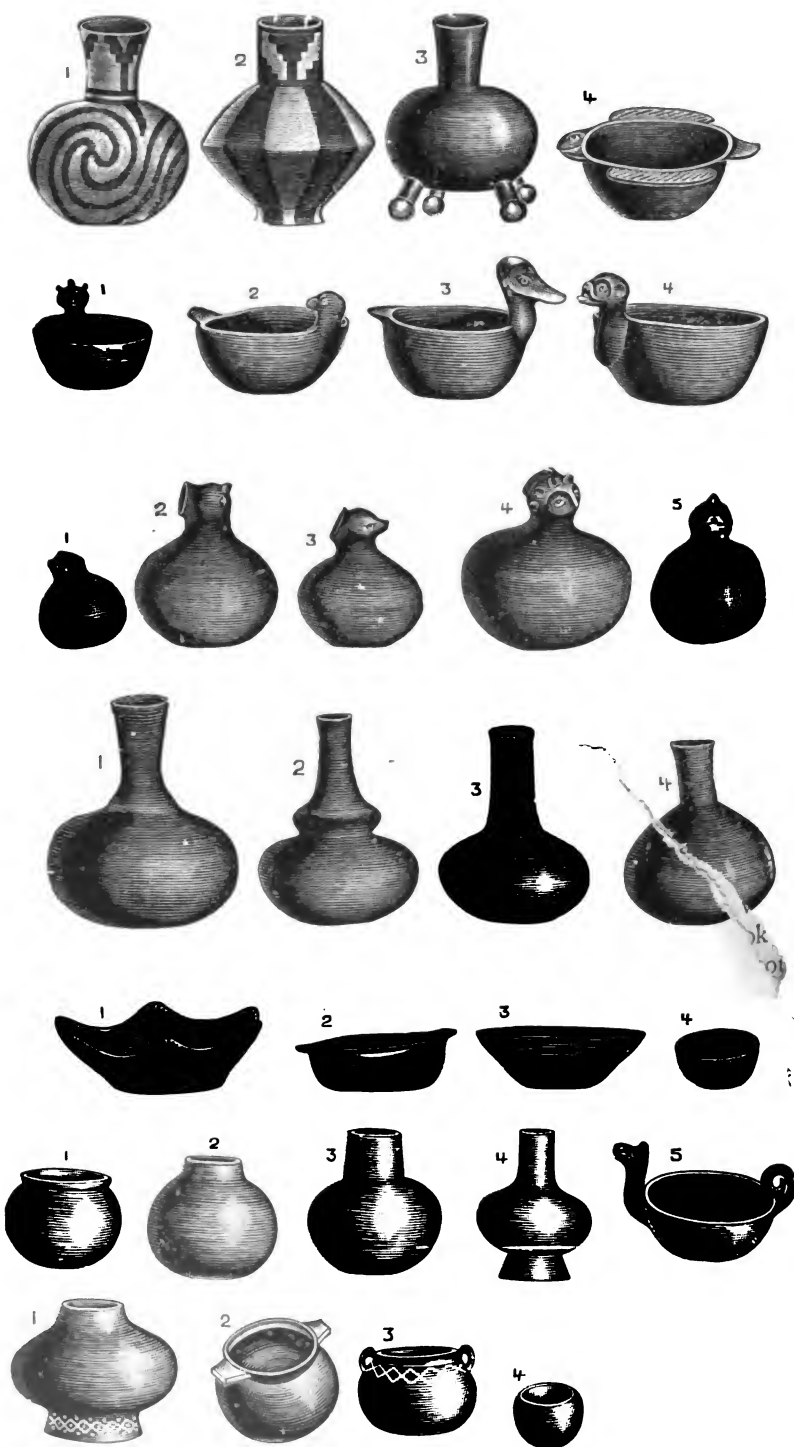
According to the same test, the Wisdom Literature is redolent of the spirit of Christ. The proverbs are for all time. They are remarkable for sanity, shrewdness, eloquence, and even fun. Their whole flavor is not sordid and worldly-wise, but it is the product of a reverent and whole-hearted acceptance of great principles. They strenuously contend that the wisdom of God is at heart redemptive, the dominant assumption being that there lay wrapped in Creation itself the purpose of winning for truth and righteousness the common man on the street.

The speeches of the friends in the Book of Job are an admirable example of how to fail to help one who doubts. These men prefer to vindicate the right position of their own views rather than to save a human soul. The inclusion of the book in the Canon is an indication that God's spirit is not hostile to a soul that is seeking to make larger adjustments and to find truer views but sympathizes and works with such a one.

Accepting, as Professor does, the main body of the result of criticism, he finds thereby in the Old Testament, not only a clarity and order greater than before, not merely the removal of many needlessly perplexing points in Scripture, but also a fresh and irresistible conviction that through Israel was a sure revelation of Almighty God which was power to lift us ever closer to him and to induce vast enthusiasm for his service.—*St. John's Episcopal Church, Cleveland, Ohio.*



POTTERY FROM FLORIDA



POTTERY FROM ARKANSAS

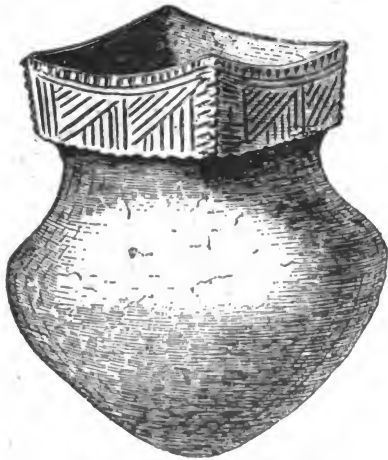
POTTERY IN ITS DISTRIBUTION AND VARIETY

BY STEPHEN D. PEET.

The study of pottery in America is very instructive, as it brings to light the social conditions of the people, and shows the difference in the tribal life and social progress. In fact it is the best index to the social status that can be found. With this thought in mind we shall take up the study of the distribution of pottery throughout the continent.

I We begin with that which is found upon the Atlantic coast. The hunter tribes of Canada had considerable pottery and the amount increases as we approach the river and the Gulf of St. Lawrence but it is generally of an inferior kind. These tribes however as well as those in the state of New York, often resorted to the cutting out from wood such large vessels as they needed, though their pipes and smaller vessels were made out of clay, but clay of a coarser grain. From the mouth of the St. Lawrence southward we find pottery more and more abundant until we reach the Gulf of Mexico, where it is very common and found in all varieties of shapes.

Prof. Perkins of the university of Vermont, has described the pottery of New England. He says, specimens rudely or-



A VASE FROM VERMONT

namented are not uncommon, but the greater part is very well made and decorated. What is perhaps the finest specimen in New England, is a jar now in the museum of the university of Vermont. It was found in Colchester, Vermont. This vessel has a round base which changes to a quadrangular shape, decorated with diagonal lines and dots. (*see fig.*) About the opening there is a quadrangular projection which is also decorated with diagonal lines. The top of this jar is finished with curved lines, giving it

quite an unique appearance.

The pottery pipes scattered throughout New York state, have been described. They are often made in the shape of animals.

Pottery vessels in Massachusetts were made in the shape of a bowl or olla. They were used as food vessels. These

pottery vessels resemble the ordinary mortars which are made of stone. They were used for pounding corn and never for cooking purposes. They are to be distinguished from the paint cups which were common among the Indians. These were made of water worn pebbles and were attended with a stone pestle. Such paint cups were used for grinding paint, and such ingredients as were essential to the Indians, for painting their faces.

Pottery pipes are very common in New Jersey. Many of them are without stems and are mere bowls, used with a reed stem. These pipes have been described by Dr. C. C. Abbott in his work on Primitive Industry. They show various patterns. Mr. Frey found among the relics of the Indians once living in the Mohawk Valley, many fine examples of clay pipes with intricate and ornate designs, the bowls of which are in the shape of birds or mammals.

II The pottery of Florida is perhaps more varied and interesting than any found elsewhere on the coast. It consists of many large vessels which were used for mortuary purposes, also a great variety of imitative figures, some of them in the shape of the birds and animals which were common here. There is no pottery more instructive in reference to the fauna and flora than this. In fact nearly all of the birds and animals



PORTRAIT BOTTLE FROM FLORIDA

which abounded in the region are represented. Mr. Clarence Moore is the best authority on this pottery as he has spent several seasons in exploration of the sand mounds and has published several folios which contained descriptions of the pottery and plates which bring them before the eye. It is a positive luxury to examine the plates and read the descriptions.

One vessel is ornamented with the head of a duck projecting and the wings and tail incised, another has the form of a horned owl, the beak projecting in front, and large eyes that seem to be staring at the observer. Another has the human form moulded upon the outside, the arms, legs and back, well rounded and in relief. A vessel made in a globular form has

See Primitive Industry, page 338.

three human heads connected with the neck. A very beautiful vessel seems to have represented a shell with convolutions. Another is in the shape of a wild turkey with head projecting from one side and the tail from the other. A vessel measuring seven inches in length, and twelve in width represents a pigeon, the head and wings projecting from the sides. Another has the shape of a female with arms folded across the breast, with a round face and plump body. The woman has a squatty form, and may represent figures which were common



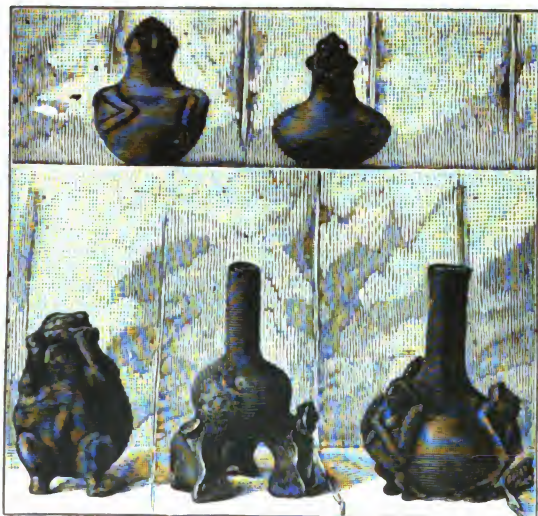
POTTERY BOTTLE WITH SUN SYMBOL FROM THE STONE GRAVES.

among the natives. Mr. Moore explored mounds in the north coast of Florida and the eastern part of Alabama, a region in which Cabeza de Vaca spent six years as a prisoner. Many vessels were found which were imitations of birds, toads, ducks and gourds.

III The pottery found in the Mississippi Valley is next to be considered. This differs from that found on the Atlantic coast in many particulars, and yet there was the same tendency to make imitative figures. There are, to be sure, many bowls

and jars, plates and vessels which are very plain, but the imitative figures increase as we go southward. It may be said that the effigy builders of Wisconsin were very skillful in imitating the forms of animals and birds, especially those which were common in the region. The pottery assumes the imitative shapes as we go southward.

There is a pottery vessel in the Hamilton collection at Twin Rivers. It has the appearance of having been moulded within a woven form and is graceful in outline with a wide top. The texture is clay, made of fine sand, but the vessel lacks ornamentation. The fluted stone axes of Wisconsin are well known. They are long and tapering in shape. The flutings extend from just below the handle grooves to within an inch of the cutting edge. The handle groove traverses three sides of



EFFIGY BOTTLES FROM ARKANSAS

the ax and is so arranged that the ax itself would be held diagonally. The pipes of Wisconsin are very numerous and are very elaborately finished but the pottery is comparatively of an inferior kind. When however we pass down the Mississippi River, we shall find that pottery has a great deal more variety, and is better finished. Mr. Bowers has described the pottery vessel which has been discovered on the Kansas River and has given a picture of it. These vessels are graceful in shape and are made out of clay of fine grades.

The place where pottery was most abundant, and where the greatest variety of shapes were found was in the village sites of the swamps of Arkansas. These have been described in the reports of the St. Louis Academy of Science, and many specimens are in the collection of the academy. Some of these are

plain, but are graceful in shape, others have legs and necks moulded into the shape of animals and human faces. One vessel is in the shape of a nondescript animal, possibly a bear standing upon his hind legs. Other vessels are decorated with coils and stepped figures. In the collection, there are many wide mouthed jars with handles, bowls with bird's heads projecting from the rim. There are dishes that are very beautiful in shape with scalloped edges. Among the vessels which are found is one representing a sun fish, another an opossum, the bowl is in the shape of an opossum and has a slightly raised rim which is plain, leaving a wide opening nearly as large as the back of the opossum itself. A remarkable ves-



FISH SHAPED BOTTLE

sel representing the human head with the mouth partly open, ears which seem to have been perforated, the eyes are partly closed and the face tattooed with lines and cross hatchings. Another represents the spider. A winged and crescent rattle snake was depicted upon an Arkansas bottle, showing that symbolism was carried to a high stage by the pottery makers of this region. Wide mouthed bottles were common.

The pottery which is found among the stone graves of Tennessee is very interesting. This has been described by Mr. G. P. Thruston. He speaks of a bottle or water jar, ornamented with an open hand, of other vessels painted with circles, also ornamented bowls and a vase or bottle on the sides of which

are painted crosses, surrounded by ornamented circles, and another bottle is shaped like a child's foot and leg. An effigy vessel is shaped like a female with folded hands and large breast. There is also a vessel shaped like a badger. Kettle shaped vessels of all sizes are found in great numbers, the largest are about twelve inches in diameter, the smallest about an inch wide. Others have the shape of a human head projecting above the rim, arms and legs projecting from the body of the bowl. Other vessels are in the shape of shells, with flaring edges. Many vessels or drinking cups have human heads for handles, some of them have caps or helmets on the head. The pointed cap was fashionable in Tennessee. Lizards are seen in relief upon the sides of the vessels. The handles of the pottery vessels are moulded into the shape of animals, dogs, panthers and squirrels. There are shallow dishes with the legs, head and tail of a turtle projecting from the rim. Terra-cotta bowls, representing the human form, with arms in relief upon the side of the bowl, were common. Other bowls have heads projecting from the body of the bottle. The dog was the only domestic animal possessed by the native tribes of



A BOWL OF TENNESSEE

North America, though the llama was domesticated in South America. Many of the bottles are made in the shape of fish. The fish was the totem among the Creeks and Chickasas, and it is possible that these pottery vessels were designed for totems. Pottery was sometimes used for earrings. They were generally plated with copper.

There are many pottery vessels that represent birds, the vessel constituting the body, but the head and tail projecting from the bowl. Vases are generally plain but symmetrical in shape. The bottles are graceful in form. The bowls are round, the necks are long and tapering. Some of the bottles are decorated with coiled figures, symbols of the whirlwind, others with stepped figures, symbols of the mountains. These patterns may have been borrowed from the Pueblos or Cliff Dwellers. There are many beautiful pieces of pottery that have been found among the swamp villages of Arkansas, others in Kentucky, Tennessee and Georgia and as far east as the Cumberland. Gen. G. P. Thruston has described the pottery which abounds on the Tennessee river in his book on the

Antiquities of Tennessee and has given many plates, representing them. From these plates we may form an idea of animals and birds which prevailed, as well as the faces and forms of the pottery makers themselves. Nothing could be more instructive than are these plates. From them we learn the imitative skill of the tribes of this region.

IV. The pottery of the Cliff Dwellers and Pueblos is different from that of the Mississippi Valley. It is generally of a finer ware. It belongs to two periods, an earlier and later, the first was made of gray coiled ware, the latter was indented. Large jars holding from one to several gallons, made from the so-called corrugated ware, are numerous among the cliff dwellers. Some maintain that they were made of strips of clay coiled spirally and indented with the finger-nail. These large jars are usually blackened from smoke, as if used for cooking



COILED WARE OF THE CLIFF DWELLERS

vessels. They are of a coarser material than the smooth pottery. Of the smooth pottery a large amount has been found; in the shape of jars with side handles, also pitchers, bowls, mugs and ladles. Small jars are supposed to have been used for lamps. Some of the pottery is unglazed, but the decorated pottery has a slight glaze upon it. Tons of fragments are scattered over the mesas, and in the valleys, and around the cliff houses. Either the people were indefatigable potters, or else the race dwelt long in the land. The red pottery and that which is decorated in black and white is supposed to be later than the gray. Mr. Walter Fewkes has described the red pottery. He says the colors usually employed are white, red and black. The variegated pottery is among the best that the ancient potters manufactured. The clay is fine and the decoration artistic.

The pottery described by Mr. W. H. Jackson presents all these different patterns. We have jugs made from coiled ware, mugs, bottles and jars with stepped figures, jars and mugs with figures in panels and scrolls. Vases from the Tusayan Pueblos show an interlinked meander, not arranged in belts, but thrown together in a careless manner. Many specimens of small spirals, scrolls and festoons are seen. These are plainer in the black and white pottery, than in the red or gray. There are also ladles with handles, black and white bowls encircled by black streaks running obliquely down making a stepped pattern, bowls with a black pattern on a white ground, large bowls with meander and parallel lines; bowls with suastikas on the outside, with white diamonds and black spots on the inside; large bowls with suastikas and scrolls in black, ware with spiral coils. These give no evidence of contact with the white man, though they contain the suastikas, greek fret, scrolls and stepped figures; which are common in Oriental countries and are world wide in their distribution. The question is, whether these ornaments were invented by the Cliff Dwellers, or came from the far east at some unknown period, or did they originate in the region where they are so common. The answer probably will differ with different persons, for some will look to the works of nature as the real source of the ornamentation. The mountains and cliffs, the clouds and the sunsets may have suggested both the patterns and colors found in the pottery.

It should be said that the sand paintings were full of symbols of the earth, sky, lightning, wind, rain, sun, moon and rainbow. The pottery was closely connected with these paintings and had the same symbols. The cult of the plumed serpent, also prevailed in the Cliff Dwellers' villages and the symbols of the same cult can be found in the ruins, in a great variety of shapes. The classification of pottery by color, surface and finish, leads to the following group: 1, coarse undecorated, 2, unpolished ware decorated, 3, polished ware, 4, red and brown ware, 5, yellow, 6, black, 7, black and white, 8, red and black, 9, red, black and white, 10, white and green.

The red and brown ware is characteristic of the ruins of the Little Colorado. The fine yellow ware is characteristic of the ruins near the Hopi villages. Black ware was made by the Pueblos of New Mexico. Black and white is peculiar to the Cliff Dwellers. Red and black is found in the ruins near the Zuni river. Red, black and white is peculiar to the Little Colorado. White and green with geometrical figures are found in the same region. The classification by form and use is as follows. 1, food bowls, 2, vases, 3, jars, 4, ladles, 5, mugs, 6, canteens, 7, cups, 8, animal shaped vessel, 9, slipper shaped vessels. The food basins exceed in number all other forms of pottery. They are ornamented on the interior with geometrical designs and figures. Some of the food bowls made of red

ware are very large. The vases and jars are numerous. The majority are globular with striped necks. The designs are usually geometrical rather than animal figures. They vary in color. The food bowls are decorated with a great variety of figures. One has the human face in which eyes and mouth are represented. Above the eyes is a crescent resembling the moon. Another food bowl has a four legged animal on its interior. The animal has a forked tongue, and feet made to symbolize the whirl-wind. Another is decorated with a quadruped resembling a buffalo. Other food bowls have mythic bird figures and rain cloud symbols. The birds have different shapes. One has wings and tail spread. It resembles a bird rising out of a cloud, though the cloud is made out of conventional lines. Another bird figure on a food bowl is represented with wings, legs, and tail feathers, but the bird seems to be standing as well as flying. Another has two birds depicted with triangular figures between them. A food bowl from



CLIFF DWELLERS VASE

Hamulabi has a spider and sun emblem inside of a circular band. A food bowl has a number of circles with the three "lines of life" leading out from the circles. Another from Chabas has geometrical designs, consisting of bands and concentric circles. There are others with triangular patterns, and broken frets. A food bowl has a bird design with triangular wings and stepped figures for a tail, and sky symbols for the

head. Another has a butterfly design combined with geometrical figures. Another food bowl has an emblem resembling the rolling sun.

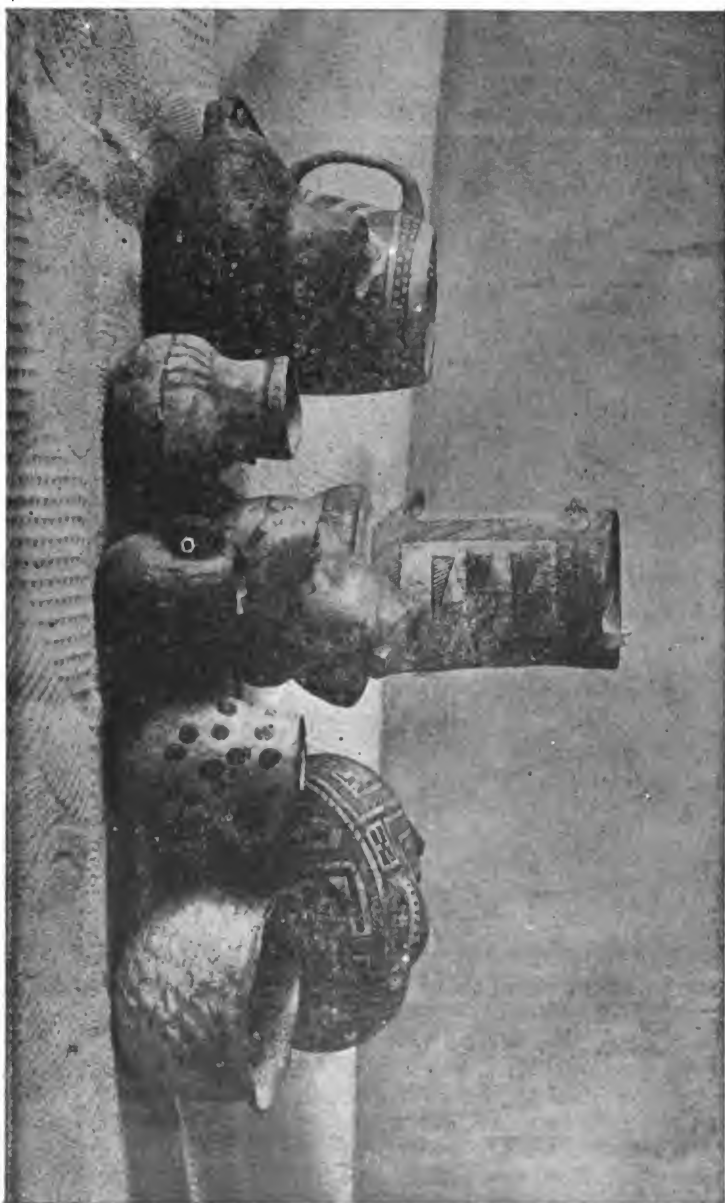
The old Zuni vases are covered with very intricate patterns which represent the arches of the sky, and the forms of the mountains, as well as the animals which prevailed. A very old vase is decorated with butterfly, cloud and wind symbols, and the circles of the sky. Modern vases are decorated with rosettes and animal figures. The storage rooms always abound with a large number of pottery vessels. The ornamentation of this pottery partook of the objects of nature, especially those peculiar to the region. There are also many mythological figures drawn upon the pottery. Mr. Walter Fewkes thinks that the mythological personages of the Cliff Dwellers,

and those of Central America were the same, but the masks which were worn in the rain dances were those common among the people. The altars which were erected by the Pueblos had sand paintings in front of them. Pottery vessels were placed around the sand paintings and in front of the so-called altars, and these contained the charmed liquids. Many of the ornaments on the pottery vessels were in the shape of double spirals, symbolizing the whirl winds. One food bowl has a bear, colored black on the exterior, another has a series of arrows on the inside, the arrows symbolizing lightning, while arches and stepped figures symbolize the clouds. Emblems on food bowls represent both the arch of the sky and the form of the mountains, and bring one into the same state of mind that these children of nature possessed, and lead one to think of the mountains, the sky, the rainbow and the stars. It is plain that the mythology of the natives of this region was embodied in the figures that are found on the pottery vessels, but it is so complicated and mysterious that it is difficult for us with our modern ideas to recognize or trace the connection between the figures on the pottery and the myths. It was not so with the people themselves, for they undoubtedly recognized the myth as soon as they looked upon the pottery decorations. There is this difference between the civilized and uncivilized races, the civilized seldom embody their mythology in their art products, while the ancient races always combine the two. This was true of the ancient races of America as well as of the far east,

V. The pottery of the ancient races of Central America is very interesting. It differs from that which was common among the northern tribes in nearly all respects. There were to be sure many plain vessels among them, but the large majority of the specimens which have come to light from the tombs are of a very superior character and are covered with an amount of symbolism which is quite astonishing. The report of the bureau of Ethnology for 1904 contains many graphic descriptions of it, from the pen of Prof. Edward Seler, Mr. E. Forsterman, Prof. Paul Schellhas and E. P. Dieseldorff.

The pottery vessels which were used for burning incense were frequently made so as to represent the human head, sometimes with their faces very skillfully wrought, but with a strange expression, produced by glaring eyes, and an open mouth. These vessels are covered with an amount of decoration, which shows the love of ornament which prevailed. There are many beautiful vases, that come from this region. There are many portrait vases, which represent the faces of the people who have long since passed away.

Prof. Seler speaks of beautiful pottery vessels which were much prized. Landa tells of a custom of the Mayas which required them, at the close of a feast, to give to each guest a mantle, a carved stool and a pottery vessel, as delicate and



CLIFF DWELLING POTTERY VESSELS.

costly as the host could afford. It is worthy of notice that in this region the tapir, parrot, monkey and toad abounded. There is no region where the barbaric taste of the natives of America is so thoroughly exhibited as here.

VI. The pottery of Honduras is especially worthy of notice because of its superior character. Mr. Thomas Gann has described urns 12 inches in height and 46 inches in circumference, unpainted and unglazed as found. Near these were small pottery animals with human faces looking out from the jaws of animals. The bodies are always hollow. The pottery idols are the most interesting. These are supposed to be the portraits of Cuculcan. The remarkable resemblance of the

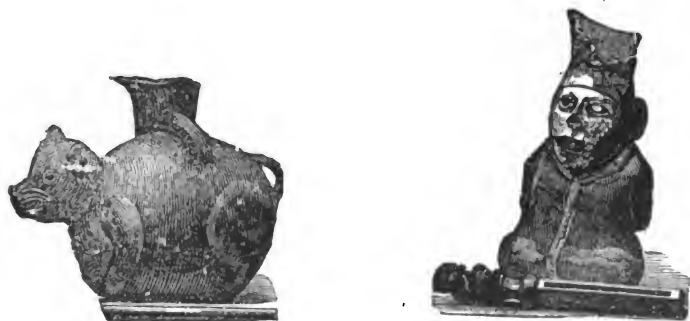


EFFIGIES FROM HONDURAS

head and head dress to the idols found at Quirigua, would prove this. Some of these idols have elaborate head dresses and peculiar faces.

Mr. Thomas Gann says the most important of the mounds were erected over buildings. Within the buildings, the walls were covered with hieroglyphics as well as human figures, some representing captives with their wrists bound, and others with elaborate head dresses, ornamented with the out stretched wings of an eagle, or the head of a dragon. A remarkable resemblance exists between the facial profiles and head dresses and those at Palenque. These are seen in the pictographs figures of Cuculcan, the Maya, god of air, and the feathered serpent. Death's heads are seen, and other strange objects.

Colors were employed in painting the pottery, black, green, blue, red, white and yellow. The head dresses, sandals, leg ornaments and costumes, are also in colors. There are also many pottery vessels which represent human and animal figures, all of them finished in the round. Many of them were in the shape of tigers, turtles, alligators and other animals. There is a combination of the human and animal figures in the pottery. Tigers are represented as sitting upon their hind legs with their mouths open and tongues protruding. There are urns with turtles placed on either side, and one immediately above. The bodies are colored, with red eyes, black eye-brows. In the fore part of the body are human hands and arms, the mouth is wide open, from which protrudes a human head. The face is light blue in color. There are animals with two heads one at either end, one that of an alligator with a huge mouth, teeth in double rows projecting from the mouth. Idols are



POTTERY FROM PERU.

common here. These idols have very expressive faces. The heads are covered with turbans, hats and helmets of peculiar shape. The faces are remarkable for their life-like resemblance and yet the expression is very fierce and awe inspiring.

VII. The pottery of Peru is quite varied in its style. It has a great variety of shapes and forms. The colors are very brilliant. The objects which are represented are very numerous. The lessons which may be learned from it relate to many different subjects. We learn from it much about the history, mythology, architecture of the country and also animal life, the dress of the nation and the appearance of the people themselves. There are many copper ornaments and these give us a very clear idea of the civilization which prevailed.

Several writers have described the pottery of Peru. The best authorities are those who have published their description in folios and furnished large plates by way of illustration. In examining the plates of various works we get better ideas of

the style of dress and the appearance of the people and the life that they led than can be secured from any other source. There are in the pottery many conventional, figures and geometrical ornaments, some of which represent human figures, others animal forms. It does not seem natural that a geometrical ornament should grow out of a human or animal form, but in the textile fabrics as well as the pottery of Peru, the two are so mingled that it is hard to distinguish one from the other. There are zig-zag lines and meanders, and stepped figures which are mingled together indiscriminately, but in the



HUMAN EFFIGY FROM PERU

midst of of their complication, animal and human legs and bodies may be traced. Pannels, squares, rhomboids, zig-zag lines and meanders are mingled with animal and human heads and bodies. The pottery vases furnish the best specimens of the human form, though often in disjointed parts. To illustrate the figure of an Indian seated will form the body of a vase, but the legs and arms are brought out in relief on the side of the vase and the head forms the mouth of the vase. Small, black dolls with disproportioned heads and limbs resemble hunch backs with pointed caps, other pieces represent an Indian bearing a load or an Indian woman covered with drapery, the head forming the handle, the cap of the Indian forming the mouth-piece, the hands and arms being in relief on the outside. In other cases the face stands out from the sides of a jug while the ears will serve as handles. The ears often will be pierced so that a cord for suspension may be put through them. The fashion of attaching ornaments to the ear and piercing the lobe for the purpose seems to have been wide-spread. It is illustrated by the pottery. In this way we are reminded of the abundance of gold, as the ear ornaments consisted of it. Work baskets and work bags and pouches have been found holding spindles and rods which were used as needles. Doll's clothes and playthings are not only found in woven material but are represented by the pottery. Llamas with halter and bridle on them are seen in the pottery. The differ-

ent colors of earthen ware are noticeable, for they are sometimes very brilliant. They are made of red and yellow clay. The earthen ware was also painted to represent textile fabrics. Bird shaped vessels, and flasks with wide necks and double handles are also common. Some of them represent plumes. The most remarkable pottery objects are those which represent domestic life on one side and battle scenes on the other. Mr. A. Baesler has described the pottery vessels made in the shape of houses; some of them single story, and others double story with porches and pillars in front. Others are in shape of houses with human figures under pavillions or porticos. Other pieces represent stepped pyramids. Others are in the shape of caves with circular platform on the outside. Still others represent houses overrun with toads, spiders and snakes. The most artistic pottery vessels are those in the



EFFIGY VESSEL FROM PERU.

shape of heads and faces, some of them are crowned heads. Many other human figures are seen wearing caps elaborately wrought and bearing cimiers in their hands. Even scenery is represented by the pottery. One piece represents a mountain with terraces. On the terraces are seated human figures with badges and banners. Another piece of pottery represents a hunting scene in which two hunters with bludgeons are trying to overtake two pumas. In another hunting scene a man is chasing a hind with a club in his hand, while a man in front is aiming at a stag. Mythologic animals are represented by the pottery, some of them are in the shape of snails with snakes heads, also armadillos with the neck, head and mouth of a serpent, also a man carrying a shield and darts and clubs. Various plants and flowers and even the cactus are represented. Animals dressed in garments, streaked with metal plates and necklaces are found. One remarkable pottery vessel represents the crescent of the moon while a star shines in the sky, while others represent a human body with a fox's head, carrying a vase on the head. The dress is ornamented with a stepped figure. A human body has an owl's head and wings with carved teeth, carrying a shield and a club. Warriors wear a helmet but with a hawk's beak and wings. One hu-

man's body representing a warrior with an owl's head, has a shield on the arm and wears a diadem on his head. He carries a club in his right hand but has the eyes and beak of an owl.

This makes the pottery of Peru very instructive for it not only represents the potters art but also shows the style of art and all kinds of architecture. It is like taking a lesson in natural history, to look at a collection of Peruvian pottery for while there are many burlesque figures, the shape of the animals, birds and human beings in various attitudes are shown. In fact it seemed to be the mission of pottery to give complete pictures of nearly all the objects that met the eye, including even the mountains and valleys and natural objects as well as animals, birds, and human beings. Further than this, the pottery gives us glimpses into the mythology and brings before the eye the very creatures, natural and supernatural which were figured in it. There are pictographs in Peru as well as rock inscriptions which represent creatures that haunt the imagination, but the pottery seems to bring these very pictographs out in bold relief. The animals, birds and human beings which in a pictograph would be on a plain smooth surface are brought by the pottery into prominence and are finished in the half-round. The very combination and attitude are represented by the figures which are moulded out of the clay. It is not claimed that the art of Peru was equal to that found in classic lands, or the objects which were moulded in clay were equal to those sculptured in marble, but it is probable that we learn as much of the costumes which were worn and the armor and weapons common among the people as well as the animals, birds and plants which abounded. Even the houses and scenery are brought before the eye. The different colors are represented, some of them are quite true to life. In fact the pottery of Peru furnishes a better idea of the people in their employments and their ordinary surroundings than we can get from the descriptions of travellers or even historians. Of course the scenery is not exhibited and the sense of grandeur is entirely lacking as we look at these singular objects, yet to the people themselves, they were very suggestive.

ORIENTAL DEPARTMENT.

EDITED BY DR. C. H. S. DAVIS.

HATSHEPSU.

One of the greatest works of archæological exploration of recent years is that which the Egypt Exploration Fund has been for more than ten years engaged upon—the clearing and partial restoration of the great temple of Amen and Hathor at Der-el-Bahari, near Thebes. It has been a most expensive work, having cost more than \$50,000, but the results have been, both from a historical and artistic point of view, of the greatest importance. The work has from the commencement been under the direction of Professor Edouard Naville, who during the last three seasons has had the assistance of that able Egyptologist, H. R. Hall, of the Egyptian department of the British Museum. There were two temples at Der-el-Bahari—the older the funeral temple of King Mentuhetep III, of the twelfth dynasty, about B. C. 2500; the later the splendid fane erected by the great Queen Hatshepsu, about B. C. 1500. This later temple is the one on which so much time and money has been expended. But the outlay has not been wasted, for we have restored to us the memorials of the life and deeds of one of the most remarkable women the Orient has ever produced.

The daughter of Thothmes I. by his beautiful wife, Queen Aahmes, who was early associated with her father, and on the walls of the birth chamber of the temple we see the scenes representing her birth as a divine incarnation of her father, Amen-Ra. All monarchs of the great Theban dynasties were supposed to be children of Amen. On another wall is depicted the ceremony of her coronation as king, for she assumed male attire, even a false beard, and used all the kingly titles in her inscriptions. One very important series of sculptures, is that which represents the return of the great naval expedition which she sent to the incense producing land of Punt, probably Somaliland, which, under Nashi, her admiral, returned laden with rich treasure and strange animals, birds and plants.

The new volume of the exploration which was recently issued by the Exploration Fund, contains some very interesting matter, for it relates to the shrine of Amen-Ra and the fore-court, all of which were richly decorated with sculptures. The shrine which consists of two rooms, was entered by a lofty granite doorway, and on either side of the door are representations of the man-queen, wearing the crowns of Upper and Lower Egypt. A specially interesting scene here represents the Queen being brought before Amen, and the god Thoth, or

Hermes, acts as priest and introduces her with a curious address :

"She salutes thee, she speaks (to thee). She cools thee with water, she gives thee incense. The double is satisfied when she fumigates thee with the eye of thy body, her incense. O Amen, lord of the thrones of two lands, when thou resteth in thy abode, where thy beauties are worshipped, grant her life, strength and happiness."

Such is the threshold prayer. The shrine no doubt contained the sacred boats of the morning and evening, boats in which he sailed across the sky. In the inner and dark shrine chamber was the splendid shrine of ebony, in which the statue of the god was kept. A portion of this shrine was discovered in 1894 by M. Naville, and it is most interesting to mention the artist who made it. Indeed, in Egypt, unlike other lands, except Greece, the names of artists of great works are known and handed down. In regard to this great temple we know that the architect was a man named Senmut, who, in addition to his artistic abilities, was a minister of state, "chancellor" or "bearer of the royal seal." He it was who built this and many other temples for his royal mistress. The work of decoration was given to a man named Tehuti. He was the Benvenuto Cellini of the age. It was he who made the splendid ebony shrine of Amen-Ra, "King of the Gods," who "plated the doors of the temple with bronze and electrum," who made crowns, necklaces and jewels for the Queen. These facts give a living interest to these discoveries, for they are, indeed, the work of the oldest masters. Another interesting series of sculptures, the works designed, no doubt, by one of those artists, represent the Queen making offering to the shades of her father and mother, and the portrait of the latter is a beautiful piece of work. Particularly interesting as showing this school of realism in Egypt, is a series of sculptures and slabs, representing the gardens of the temple. Here we see ponds lined with shady trees, or bordered with lotus plants, and full of fish. Here we see a duck rising with a fish in his mouth, or resting on one leg and scratching his poll with the other. A fish nibbles at a lotus tree which touches the water, or a flock of flamingoes fly frightened away from a reed brake. Such is the art of which this remarkable queen was the patronness, and Tehuti and Senmut her artist craftsmen, which has been rescued from destruction by the Egypt Exploration Fund.

THE Government press at Peshawar has issued a quarto volume of 56 pages, with 12 photographic plates, containing Dr. Stein's report on his "Archæological Survey Work in the North-West Frontier Province and Baluchistan." The report gives fresh evidence of Dr. Stein's indefatigable industry and the wide range of his erudition. He has been examining

the ancient sites and traditional remains on the North-West Frontier of India, and has apparently left nothing unvisited that might contribute to the interest of Indian archæology. One question which was thought to be settled, he leaves involved in doubt. The situation of the celebrated rock fastness of Aornos, the capture of which figures so prominently in all classical accounts of Alexander the Great's campaign on the Indian frontier, was supposed to have been determined by the researches of the late Col. Abbot, who decided that it must have occupied the heights of Mahaban. Dr. Stein proves, however, that there is nothing in common between Mahaban and the rock described by Arrian, and no trace can be found on top of the mountain of the plateau described by the classical historians.

Besides disposing of Mahaban, Dr. Stein has rendered valuable service by identifying the site of Buddha's "body offering," or the holy spot where he offered his body to feed a starving tigress—a site which for ages was one of the most sacred bournes of Buddhist pilgrimage. Applying his gift of topographical analysis and his remarkable knowledge of legendary lore and Oriental scholarship to his observations, Dr. Stein has no hesitation in assigning the site of that ancient gathering-place of the faithful to the hill of Banj, south of Mahaban. He found here ruins that coincide closely with the detailed description of the sacred "temple of the collected bones" and its surroundings.

THE German Palestine Society is bringing out three publications containing an exceptionally large amount of new matter for the scholar and investigator. The first is a "Karte der topographischen Materialien des alten Jerusalem," with letterpress by Director August Kümmel of Bremen. The chart is on the scale of 1:2,500, and on two sheets of 75 x 100 centimeters gives in red a map of modern Jerusalem, with the remnants of ancient Jerusalem as discovered to date in black, excluding everything that is mere theory or hypothesis. The second work is an exact reproduction of the mosaic map of Palestine found in December, 1896, in Madeba, in ancient Moab, the size being one-sixth of the original. It is issued in ten sheets, with an explanatory text by Professor Guthe of Leipzig. Each lithographic stone plate has been compared with the original by Palmer, an architect of Jerusalem, and as the work, for the publication of which seventy stones are needed, passes through the press, a second comparison is made by Professor Guthe. The third publication is that of a map of the East Jordan country, prepared by Dr. Schumacher of Haifa, in ten large sheets, a companion and supplement to the map of Western Palestine, in 26 sheets, published by the British Palestine Society.

CONTENTS of the *Proceedings* of the Society of Biblical Archæology, Vol. XXVII., Part V.: "Magic Ivories of the Middle Empire," III., F. Legge. "An Inscription of S-ankh-ka-ra; Karian and Other Inscriptions," A. H. Sayce. "The Burgh Papyrus, Transcribed, Translated, and Annotated," by E. Revillout. "A Hebrew Amulet against Disease," W. L. Nash. "The Position of Tausert in the Nineteenth Dynasty," E. R. Ayrton. "Note on the Boss of Tarkutimme," E. Sibree. "Le Nom du Pschent," Paul Pierret.

Hitherto, the supposition that Tausert was a daughter of Sety II. and wife of Si-ptah has been generally accepted; a supposition which principally rests on the fact that in the tomb of Tausert the cartouches of Si-ptah have been cut over those of Sety II. Mr. Ayrton shows in the above article that Tausert must have been the wife of Sety II.

The Burgh Papyrus has never before been published. The first part of it is of special interest as showing us an "*Actio sacramenti*" in criminal cases, analogous to that which was in use in Roman Civil Law (a solemn oath accompanied by the deposit of a sum of money, which was forfeited if the cause was lost). The rôle of the accuser, who is not an accomplice, is shown more clearly than in the other analogous law-suits which have come down to us.

MRS. LETITIA D. JEFFREYS has recently published a volume entitled, "Ancient Hebrew Names; Notes on their Significance and Historic Value." Professor Sayce contributes a short preface. Her design is to draw attention to the very important contribution to the history of mankind afforded by the meanings and linguistic significance to be found in proper names, and suggests that with respect to the recorded genealogical line from Adam to our Lord, in some of their names conferred at various periods, there may be observed the gradual unfolding of a Divine purpose or Revelation. Her book is hence a study of Biblical names from the combined standpoints of philology and exegesis, seeking to deduce from the etymology of names the ethical and religious ideas embodied in them, and to connect these ideas with doctrine of Biblical design and revelation generally accepted by orthodox Christianity.

"Malabar and Its Folk," by T. K. Gopal Panikkar, B. A. Malabar is a district of British India, in the province of Madras, with a population of nearly 3,000,000, Hindoos, Mohomedans, and Christians. It is very difficult for a foreigner to become acquainted with the inner life and habits of the Malabar people. Its people, its customs and manners, its institutions, its architecture and its traditions are all so archaic, and so deeply interesting, that it affords points of peculiar attrac-

tion to the student of ethnology. It is, therefore, very interesting to read this book by a native of Malabar, who has been familiar with its customs from his earliest days. In a very interesting manner he has set forth its social, legal and religious life. This is the first book of the kind giving by a native writer an exhaustive account of the pastimes, superstitions, beliefs and forms of worship and religions of this peculiar and interesting people. An interesting account is given of the Syrian Christians of Malabar, so called because they use the Syrian version of the Bible. They stand alone as a distinct community presenting striking differences from the other members of the great Christian folds. Their existence as a separate community is inextricably associated with, and dates from, the apostolic times. (Madras, G. A. Natesan & Co., Esplanado, 12 mo. pp. 275; Price Reals 1-8-0.)

DR. B. P. GRENFELL and Dr. A. S. Hunt have issued through the Egypt Exploration Fund their new book, "Hiteh Papyri," Part I. It represents the publications of two years. Owing to the lack of funds, no volume was issued last summer by the Græco-Roman branch. It is hoped that early this fall the learned excavators will bring out the fragment of the lost Gospel, the most conspicuous of the finds of their last season. This document, which relates to a visit of Jesus and his disciples to the Temple at Jerusalem, and their meeting with a Pharisee, is declared to be genuine by no less authority than Professor D. S. Margoliouth.

An interesting report concerning the durability of cardiac muscle has been presented by Professor Lortet, of the French Academy, who has been concerned in investigations in regard to the condition of the heart and viscera of the embalmed body of King Rameses II., who died 1258 B. C.—3,164 years ago. There were four vases which contained the remains of internal portions of the body. Three of these were of certain indeterminate granular substance mixed with pulverized soda, and are respectively considered to be the remains of the stomach, liver, and intestines of the dead king. The lid of the fourth vase was ornamented with a jackal, and when opened it was found to contain the heart, the appearance of which was an oval plate. So solid and heavy was the tissue, that it could not be removed without the assistance of a saw.

SWAMI VIVEKANANDA. *A Collection of his Speeches and Writings.* This is the first attempt to put together in a single volume a representative collection of the works of Swami Vivekananda, one of the most remarkable men India has produced in recent times. The Swami came to public notice at

the Parliament of religions held in Chicago in 1895. He travelled through various cities in this country, in England and in India, delivering addresses, and sometimes courses of lectures, and everywhere he had many friends and admirers. This book covers the whole field of Hindu religion and philosophy, and presents in a lucid and attractive form the abstruse doctrines of Eastern religious philosophy. The Swami was an eloquent teacher and preacher. He was full of the consciousness of a great mission, and to his countrymen his speeches were ever a trumpet call to duty. This book has five portraits of the Swami. (Madras, G. A. Natesan & Co., Esplanade, 12 mo. pp. 672. Price Reals Two.)

THE fifth and concluding part of the fifth volume of the *Beiträge zur Assyriologie* is from the pen of Mr. K. D. Macmillan, and is entitled "Some Cuneiform Tablets Bearing on the Religion of Babylonia and Assyria." The texts published by the author were copied some three years ago from tablets of the Kuyunjik collection preserved in the British Museum, and, though many of them are merely fragments, they have furnished words and verbal forms for the glossary of the less common words and phrases which concludes the work. The tablets do not form any complete or connected series, but they are all religious texts of one kind or another, and Mr. Macmillan has expended considerable care in his attempt to make his copies and translations accurate. Dr. A. Ungnad has lithographed the copies of the texts, and he also contributes a short article on the particle "ma" in Babylonian and Assyrian.

The fourth part of the fifth volume of the *Beiträge zur Assyriologie und Semitischen Sprachwissenschaft*, edited by Professors Delitzsch and Haupt, deals with a series of Old-Babylonian commercial tablets of the period of the First Dynasty of Babylon, which have been edited and translated by Dr. Thos. Friedrich under the title of "Altababylonische Urkunden aus Sippara." The tablets are preserved in the Imperial Ottoman Museum at Constantinople, and have been selected from among those found by Père Scheil during the excavations at Abu Habba in 1904. Dr. Friedrich has published the texts of the tablets in a series of lithographic plates and has furnished transliterations, translations, a commentary, a list of proper names, and a dissertation on the subjects of the seal-impressions.

DR. M. A. STEIN, whose archæological researches in Eastern Turkestan in 1900-1901 were so successful, is on his way to same region at the head of a mission sent out under the auspices of the Indian Government and the British Museum. It includes a trained native surveyor for geographical work, and

is equipped for a period of ten years. He hopes that by further excavations in the desert ruins he will be able materially to add to our knowledge of the ancient inhabitants and their history. In Chinese Turkestan Russian and German scientific men are at work, and a branch archæological expedition is about to start to pursue investigations from Kashgar to Peking.

THE first instalment of Professor Prince's new book, "Materials for a Sumerian Lexicon," has appeared. The author is an ardent opponent of Halévy and his school. He sets forth the theory that "the Sumerian of later days, especially of the hymns, is a more or less deliberately constructed hodge-podge of Semitic inventions superimposed on what could only have been a non-Semitic agglutinative, almost polysynthetic, language"; and he hopes "that this will go a long way toward setting at rest the argumentation of the constantly decreasing Halévyan school." Part I. contains the letters A-E. (Leipzig: Hinrichs, Pp. xxxvi—109. Price 24 marks.)

The American Journal of Semitic Languages and Literatures, July. "The Etymology of Mohel, Circumciser," Paul Haupt. "Inscribed Palmyrene Monuments in the Museum of the Syrian Protestant College, Beirut," H. Porter and C. C. Torrey. "Recent Contributions to Assyriology," W. Muss-Arnolt. "A Mandæan Hymn on the Soul," S. Ochser. "Some Contributions to the Interpretation of the Song of Songs," H. H. Spoer.

Says Dr. Spoer; "The study of the Song of Songs has received, during the last few years, various valuable contributions from American and European scholars. A careful study of the Song of Songs, supplemented by personal observations made in Palestine, during almost three years' residence, has convinced me that much remains still to be done before we shall have disentangled the mystery of the text and meaning of this collection of charming Volkslieder.

"My study has led me to regard the Song of Songs as a combination of a northern and southern recension of songs, originating in southern Palestine, more especially around Jerusalem. The weaving-together has naturally been casual and accidental, so that it is not very difficult to separate the foreign elements—*i. e.*, those which have come from the north—from those which are original and southern."

At a recent meeting of the Paris Academy of Inscriptions and Belles Lettres, the American correspondent of that section of the Academy, the Duke of Loubat, announced a sensational discovery of great archæological value in the Island of Delos, made by Professor Maurice Holleaux, consisting of six large

archaic lions in marble unlike anything hitherto found in Greece. Several houses in complete condition have been unearthed. In one house was found an inscription giving the precise dates of construction, the names, etc.. also a statue of the muse Polymnia, analagous but finer than the celebrated statue of the same muse in the Berlin Museum, and which is a replica of work executed by Philiskos of Rhodes. The drapery of the newly-discovered statue is described by M. Holleaux as equal to anything known in Grecian sculpture. Among the other statues excavated is a magnificent head, larger than the one of Dionysus found in a temple recently explored, and it is regarded by M. Holleaux, who writes from Delos under date of August 17th, as one of the finest existing in Greece. M. Holleaux also announces the discovery of the statue of a woman of great beauty, a great amount of fine pottery and ceramics, forty gold coins, many gold jewels, such as were never before met with, including a golden image of Harpocrates, the god of silence, mounted on a gold ring. The discovery of these art treasures at Delos caused a great stir among the French savants, and M. Loubet has received the thanks of the Academy and of the French Government for his intelligent energy and his annual subsidy of \$10,000 which enabled the French School of Athens under the direction of M. Holleaux during the past five years to continue the work which has already yielded such splendid results.

Documents from the Temple Archives of Nippur, Dated in the Reigns of the Cassite Rulers. By Rev. Albert T. Clay, D. D. These are Volumes XIV. and XV. of the cuneiform texts published for the department of archæology of the University of Pennsylvania. The greater part of the tablets published in these two quarto volumes was discovered during the second expedition to Nippur, sent out by the Babylonian Committee of the University of Pennsylvania, in the years 1889-90, under the directorship of Prof. John P. Peters. Others were from the discoveries made by Dr. John H. Haynes, the director of the third expedition, 1893-94. With the exception of a few Babylonian tablets of the second millenium before Christ that have been published, the nearly four hundred tablets that have been reproduced and deciphered in Dr. Clay's two volumes represent the first collection of a period covering twelve centuries. These clay documents consist largely of records of taxes collected and business transacted by the bursar of the temple, including receipts, payment of salaries to officials and of pensions to beneficiaries. There are, in addition, a number of private contracts, such as an agreement made by a citizen to assume a debt for which a priest had been imprisoned, and another tablet makes record of a decision in which a husbandman is required to make good the loss of a neighbor's crop,

inasmuch as he failed to replace by a certain date an ox which he had borrowed, and which had broken its leg while in his custody. Dr. Clay has written a very comprehensive introduction, describing the case-tablets, seals and their substitutes, check-marks, the stylus, and paleographical notes. There is also a concordance of proper names. Assyriologists general¹ will heartily welcome this valuable work. The publication of these texts is made possible through the generosity of Mr. Eckley Brinton Coxe. Volume XIV. has seventy-two plates of autograph texts and fifteen half-tones reproductions. Volume XV. has seventy-two plates and twelve half-tone reproductions. (Philadelphia. Department of Archæology, University of Pennsylvania. Price \$6.00.)

Just at present the excavations in the Roman Forum are almost at a standstill. The property at the Via Cavour, covering the north part of the Basilica Æmilia, has, however, been purchased by the Government, through the continued generosity of Lionel Phillips, and workmen are now engaged in removing the buildings. Commissioner Boni intends to proceed with the excavation of the rest of the Basilica at once, and the work ought to be finished in the course of the coming winter. It is not to be expected that the completion of this excavation will add much to our knowledge of the edifice itself, but it will be interesting to discover whether there was a row of *tabernæ* on its north side, as there was on the south side of the Basilica Julia. It is unfortunate that funds are not at hand to provide for the extension of this excavation around the Temple of Antoninus and Faustina, across the end of the Via in Miranda, as far as the Church of SS. Cosma e Damiano the so-called Templum Sacræ Urbis.) The excavation in the ancient necropolis has reached its limits, in fact that portion that is nearest to the Temple of Faustina has already been covered up again, and it is the intention of the director to cover all the rest after three or four years. The surface of the tufa disintegrates so rapidly, now that it is exposed, and so much pumping is necessary to keep the water out, that Commissioner Boni thinks there will be no good reason for keeping the tomb open beyond the period mentioned.

Much interest has been aroused in Rome by the work that Signor Boni is now doing at the Column of Trajan. Investigation showed that a large excavation had been made under the pedestal of the column during the middle ages, and that a chamber in the pedestal itself had been filled up. This chamber has now been excavated. A small window opens into it on the southwest side, and along the northwest side something has been cut away which Boni thinks may have been a sarcophagus. Almost all the missing fragments of the great marble wreath that forms the base of the column have been

found, and are being replaced. A mould of this wreath is also to be made, so that plaster casts may hereafter be procured. The architrave and the inscription are also to be restored.

"Western Tibet and the British Borderland: The Sacred Country of Hindu and Buddhists." By Charles A. Sherring, M. A., F. R. G. S.

While there are many books which treat of Northern, Eastern and Central Tibet, this deals with the life, trade and government of Western Tibet, which is the only part of that country that comes into actual physical contact with British Territory, excluding the inaccessible parts bordering on Assam. Mr. Sherring deals with the religion and primitive customs of the border tribes. The country described, *viz.*: Mount Kailas the Heaven of the Hindus and Buddhists, and the Holy Lake of Mansarowar whose sacred waters cleanse from the sins of a hundred rebirths of transmigration, is most sacred to Hinduism and Buddhism, and these unique illustrations and a full account of what is most revered by the adherents of those two religions, and of the routes followed by pilgrims, whose numbers will probably increase year by year, Mr. Sherring has produced a volume of unusual interest. Dr. T. G. Longstaff, a member of the Alpine club, describes his attempt to climb a mountain 25,850 feet high, and it is the first account of an ascent of a Tibetan mountain under modern conditions with Alpine guides. Dr. Longstaff and his guides slept at 23,000 feet in the snow, and finally reached an altitude amongst the highest ever attained. There are two maps, 186 half-tone illustrations from photographs, and 30 large panoramic views. (London, Edward Arnold, 8vo. pp. 353. Price 21 shillings.)

CONTENTS of *The American Journal of Archæology*, Vol. X., No. 2, "Magical Formulæ on Lintels of the Christian Period in Syria," W. K. Prentice. "Latin Inscriptions—Inedited or Corrected," G. N. Olcott. "The Charioteer of Delphi," O. M. Washburn. "Terra-Cottas from Corinth," D. M. Robinson. Archæological Discussions.

In *Orient. Lit. Zeitschrift*, Vol. VIII., Dr. W. Max Müller criticises the current methods of transcribing Egyptian. The older method of Lepsius, that is still used in England and France, is far behind the present state of Egyptological science, and the so-called Berlin method that was introduced in the *Zeitschrift für Ägyptologie* in 1889 marks an advance, but was a different system from that used at present in the Semitic languages. This causes a constant confusion. The author maintains that a uniform system should be used for the Egyptian

and for the Semitic languages, and points out what are the proper equivalents in Roman characters of the different Egyptian signs.

ONE of our most valuable exchanges is *The Indian Review*, edited by G. A. Natesan, B. A., and is published at Madras. It is bright and scholarly, and is an ably-conducted journal, covering literary, educational, industrial and departmental matters, with summary of noteworthy articles in leading English, American and Indian periodicals. It is published monthly at three dollars a year to foreign subscribers.

RELICS FROM THE DAYS OF CHRIST.

Much has been written about the relics which have been preserved in Europe, but it not often that they are described in detail. The following from the pen of Wm. E. Curtis will be of interest: "These coronation robes are older and more elaborate and of greater intrinsic and artistic value than any other garments that exist, and they have been worn by each successive emperor for nearly 900 years. But what is of even greater value are the relics of Christ and the apostles which belonged to Charlemagne and have been handed down from generation to generation of sovereigns since his time. There is a tooth of John the Baptist, a piece of a garment worn by John the beloved apostle, three links of the iron chains with which the apostles were bound, a bone from the arm of St. Anne, the mother of the virgin, in a tube of the purest gold; a fragment of the manger in which Christ was born, a piece of coarsely woven linen which is said to have been used by our Savior to dry the feet of his disciples, a part of the table cloth used at the last supper; a piece of the holy cross, surpassed in size only by that preserved at St. Peters in Rome, and, beyond all other articles in importance, the lance which pierced the Savior's side. A slit has been made in the center of the blade in order to admit a nail which is said to have been taken from the cross. The history of this lance can be traced back to the legendary times of the Merovingian kings, and with the other sacred relicts, is supposed to have been presented to their ancestors by the Empress Helena, mother of Constantine the Great, who brought them from Jerusalem. This lance is said to have been carried by St. Maurice in the Crusades, but its authentic history begins with the ownership of the great Emperor Charles. From his time they have been the most sacred treasures of those who have followed him upon the throne until the French revolution, which led to downfall of the holy Roman Empire that had existed for a thousand years. Napoleon attempted to secure them during his conquest of Europe, but they were concealed in a religious institution near Nuremberg until peace was restored."

PETRIE'S WORK IN THE DELTA.

BY W. C. WINSLOW, PH. D., DD., LL. D.

Further interesting particulars have been received by me from Prof. Flinders Petrie regarding his discoveries in the Delta, last winter and spring, under the auspices of the Egyptian Research Account. Of the town and temple site of Onias, located by him at Tell-el-Yahudiyeh, twenty-three miles north of Cairo, he remarks "that it is now seen how the form of this town was arranged to be a copy of the temple hill of Jerusalem, and that it was a New Jerusalem in Egypt." Another of his conclusions regarding this temple of Onias is that "the details now found exactly correspond with all the statements of Josephus, and reconcile points in which discrepancies had been supposed to exist in his descriptions." For the first time archæologists are now brought into definite touch with the Hyksos, or shepherd kings *in their own works*; and Petrie declares that "for the first time an approximate history of these kings can be arranged."

Egyptologists have sought to solve three problems in the Delta. Where was Avasis, the capital of the Hyksos kings, under the last of whom, Apepi, Joseph acted as his prime minister? Where was Onias, the town and temple built by Onias, the high priest, who founded the famous Jewish colony in Egypt? And where was Naucratis the Greek mart in Egypt prior to the rise of Alexandria, so picturesquely portrayed by Ebers in his "Egyptian Princess"? Well, Petrie, in 1885-6, found the Greek site and many fascinating relics of Graeco-Egyptian arts and industries, some of which the writer secured for the museum in Boston. And now Petrie in one campaign solves the other two problems.

But more. Where were Pithom and Raamses (Exodus LII), and what of Goshen? Naville, in 1883, unearthed Pithom, and his labors with those of others have pretty well defined the *locale* and boundaries of where Israel lived during its sojourn. And, for a finishing touch, Petrie has doubtless now located the site of Raamses which was used by Rameses II. as a store city for the products of Lydia. I have more than once asserted that "treasure cities" were not misapplied terms, inasmuch as the grain (at Pithom) was as precious as life itself, and now we have proof that imports of value were stored at the other city which enslaved Hebrews built.

Thus are three Egyptological and three Biblical problems of acute interest deftly solved. So much for the humble spade.

Let us now quote from Petrie's communication. He disclosed near Onias a great Hyhros camp, the site also of Avasis' of which he writes: "Here, at last, we have an actual work of this strange people, to tell its own story. The camp is

about 1,500 feet across, the bank is about 200 feet thick at the base, and was faced outside with a slope of white stucco, 70 or 80 feet long, at an angle of about 40°. Within a year or two they borrowed the walling (*i. e.* the art) from the Egyptians, and threw out flanking walls to defend the entrance gangway more completely. And in a generation or two they made the skilled masons of Egypt build a great stone wall with about 80,000 tons of the finest limestone in large blocks, from the Mohattan Hills twenty-five miles distant."

One more citation, and about the "Mound of the Jew." Petrie writes that "it covered an area of over six acres, and rose to a height of over 70 feet, crowned by buildings reaching 90 feet above the plain. A great ceremonial of sacrifices took place at the foundation of the temple. * * * The dozens of pottery ovens for the roasting of the lambs—probably at a Passover feast—may still be seen. The beautiful town contained about four acres of houses, and the highest point was reserved for the temple and its courts. This was a copy of the temple of Zerubabel at Jerusalem, which is known to be smaller than the temples of Solomon and Herod: here it was just half the size of Solomon's temple."

The Jews intended that their New Jerusalem in the Delta should be a reproduction of the Holy City; and Petrie found that "the masonry is that of the style of that at Jerusalem, and is not Egyptian."

Even the bricks speak—as did those at Pithom—for Petrie found "a piece of the builder's accounts, showing bricks to have been delivered by a Jew named Abram."

The coming illustrated volume by Dr. Petrie for the Egyptian Research Account will prove of unique interest. It goes to subscribers of five dollars, and subscriptions can be sent to Rev. William Copley Winslow, 525 Beacon St., Boston. Dr. Petrie now devotes his entire time to this newly organized society.

POMPEII.

Late explorations of the Italian coast near Pompeii have changed the opinion of antiquarians. The submerged Roman ruins along the coast used to be regarded as foundation walls thrown out for sea baths, but it was made clear that they are the remains of noble mansions, and that they point to the time when the land on which they stood was far above the level of the sea. The shore is, in fact, strewn with the wreck of buried cities. Coast roads have vanished, ancient quarries have been flooded, and the breakwaters of the harbors of classical story covered fathoms deep with water. A great submarine sea wall, with concrete piers seventeen feet high, still protects the fragments. But neither the fragments nor the great sea wall have been visible in the light of day for two thousand years.

ORNAMENTS OF SAVAGE TRIBES.

BY OWEN JONES.

From the universal testimony of travelers it would appear that there is scarcely a people, in however a low stage of civilization, with whom the desire for ornament is not a strong instinct. Man appears everywhere impressed with the beauties of nature which surround him, and seeks to imitate to the extent of his power the works of the Creator. Man's earliest ambition is to create. To this feeling must be ascribed the tattooing of the human face and body, resorted to by the savage to increase the expression by which he seeks to strike terror on his enemies or rivals, or to create what appears to him a new beauty.

The efforts of a people in an early stage of civilization are like those of children, though presenting a want of power, they possess grace and naivete rarely found in mid-age, and never in manhood's decline. It is equally so in the infancy of any art. The very command of means leads to their abuse; when art struggles, it succeeds; when resulting in its own successes, it as signally fails.

EGYPTIAN ORNAMENT.

Architecture of Egypt has this peculiarity over all other styles, that the more ancient the ornament the more perfect the art. All the remains with which we are acquainted exhibit Egyptian art in a state of decline. Monuments erected 2000 years before the Christian era are formed from the ruins of still more ancient and perfect buildings. We are thus carried back to a period too remote from our time to enable us to discover any traces of its origin; and whilst we can trace in direct succession the Greek, the Roman, the Byzantine, with its off-shoots, the Arabian, the Moresque, and the Gothic, from this great parent, we must believe the architecture of Egypt to be a pure original style, which arose with civilization in Central Africa, passed through countless ages, to the commanding point of perfection and the state of decline in which we see it.

ASSYRIAN AND PERSIAN ORNAMENT.

Monuments known do not carry us back to any remote period of Assyrian art. Like those of Egypt, those belong to a period of decline. The Assyrians must have been either a borrowed style, or the remains of a more perfect form of art have yet to be discovered. I am inclined to believe the Assyrian is not an original style, but was borrowed from the Egyptian, modified by the difference of the religion and habits of the Assyrian people. In comparing the bas-reliefs of Nineveh with those of Egypt we cannot but be struck with the many points of resemblance in the two styles; not only is the same mode of representation adopted,

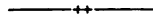
but the objects represented are oftentimes so similar that it is difficult to believe that the same style could have been arrived at by two people independently of each other. Assyrian sculpture seems to be a development of the Egyptian, but instead of being carried forward, descending in the scale of perfection, bearing the same relation to the Egyptian as the Roman does to the Greek.

GREEK ORNAMENT.

Egyptian art, derived direct from natural inspiration—founded on few styles, remained unchanged during the course of Egyptian civilization.

Assyrian art, a borrowed style, presenting none of the characteristics of original inspiration, rather suggested by art of Egypt, already in decline—which decline was carried still further.

Greek art on the contrary, borrowed partly from Egyptian and partly from Assyrian: was the development of an old idea in a new direction; and unrestrained by religious laws. Greek art rose rapidly to a high state of perfection. It carried perfection of pure form to a point which has never since been reached. Greek ornament was wanting in one of the great charms which should alway accompany ornament,—viz.: symbolism. It was meaningless, purely decorative, never representative, and can hardly be said to be constructive.



THE INSPIRATION OF THE PENTATEUCH.

Biblical students throughout the world are interested in a report made to Pope Pius X, by a pontifical biblical commission appointed to investigate the question whether the books of the Pentateuch, written by Moses, were inspired, or merely the result of human effort. The report of the commission is in effect that Moses was essentially the author of the Pentateuch, but that all the books were not inspired.

The pope has approved the report, and, while this has not been announced, the decision doubtless will be accepted by Roman Catholic scholars as final, so as to bind all Catholics as in a doctrine of faith, and will fix their attitude toward the higher criticism of the Bible accordingly.

Translations of the report and of an address to the clergy later made with the approval of the pope have just reached this country. The investigation was instigated by wide differences of opinion as to the authorship of the books of the Pentateuch. Questions were framed and the report was signed by the secretaries, Fathers Janssens and Fulcranus Vigouroux, both eminent scholars.

A LIBRARY OF RARE BOOKS FOR SALE.

Deprived by a cruel blow of an immense sum of money, currently believed to amount to \$1,000,000, Lord Amherst of Hackney has determined to part with the most precious of his possessions, his famous library, worth about \$750,000. This remarkable collection of manuscripts and books was begun more than fifty years ago by Lord Amherst—that is to say, long before the American competition had arisen.

He not only has patronized the leading booksellers since 1852, but also made extensive purchases at all the great sales, beginning as early as that of the famous Eshton collection, and continuing through the whole series of celebrated auctions of the libraries of Sir William Tate, the Duke of Marlborough, William Beckford, the Earl of Jersey, Michael Woodhull and Lord Ashburnham.

Since the dispersal in 1897-98 of its bibliographical treasures, this library has been formed throughout with a comprehensive and well defined purpose, namely, to illustrate by the best books and manuscripts, irrespective of price, the history of printing and bookbinding from the earliest times down to the year 1700; the history of the Reformation, both in the British Isles and elsewhere, but especially the story of the Church of England, by its Bible liturgies and controversial tracts; the history of gardening; the chief masterpieces of English literature; the history of the Holy Land, etc.

English Bibles make a remarkable series and with them go an extraordinary collection of reformation tracts and English liturgies. The library contains also that greatest of books, which was also reckoned the most valuable till the Mentz Psalter brought a still higher price in auction—the Gutenberg Bible of 1483, or earlier; while other works of the early German press, the Dutch Spieghel of 1463 and the famous Lactantius from the press of Subiaco, are enough in themselves to mark the library as one of the highest distinction.

EDITORIAL.

EXTERMINATION OF THE INDIANS.

It will be remembered that the first voyagers who traversed the Atlantic coast, not long after the discovery of the continent, found Indians dwelling in villages and held together in confederacies; and in full possession of the land, but not one of those tribes are in existence. Their names are on the waters, their chiefs are known to history, but they have disappeared. Massachusetts, Connecticut, Delaware, Alabama, Ohio, Tennessee, Illinois, Indiana, Wisconsin, Iowa, Minnesota, Arkansas and Dakota are all Indian names, but the tribes who gave their names to these states have disappeared, or are dwelling in small reservations and are seen only by those who make special trips to reach them.

The policy of the government for a time was to keep the Indians in their reservations, with their lands held in common by the tribes; but at present the land is held in severalty, and the result is that while the deed is in the hands of the Indians, yet the land is in many cases occupied by the whites, and will ultimately come into their possession. The same process of crowding out the the Indians from their possessions is going on silently, that began two hundred years ago in the Mississippi Valley, though there is no such bloodshed or fierce Indian wars as prevailed at that early date.

When Hernndc de Soto led his little army of Spanish soldiers through the Gulf States, he found Indian tribes dwelling in villages, their chiefs having their long houses upon the summit of the pyramids, but the people having their houses around the hollow square which was called the chunky yards; while between the villages were great fields of corn, which furnished abundant subsistence to the people. Not one of these villages is in existence to-day, and it would be difficult even for the archæologist, with his skill in discovering relics and classifying them according to their use, to say where those villages were located.

The great event in the history of Georgia was marked by the contest between the Indians and the whites as to who should hold the land, whether the Indians had any right to the land which they had inherited from their fathers. The contest ended in the removal of the Indians, and they are now gathered into the Indian Territory, but fast losing their identity as tribes. There was a time when the states of Ohio, Indiana, Illinois and Wisconsin were occupied by Indians. At the present time there are a few reservations in the state of New York in which the remnants of the "Six Nations" are

gathered, but they are not known as Indians, and would hardly be recognized as such by those who see them.

The name of La Salle, the French explorer, is retained on the map alongside of Peoria, the name of an Indian chief, but all those Indian villages which were scattered along the lakes and rivers have disappeared. Not a single remnant is left upon the soil to remind the white man where they once stood. An Indian would be as much of a curiosity in the city of Chicago, as a camel from the Desert of Sahara, or an Arab sheik seated upon his favorite horse and clad in his usual habiliments.

The bronze statues group, which was seen by visitors to the Columbian Exposition, stand near the track of the Illinois Central Railroad, close by the home of George M. Pullman, where Mrs. Pullman still lives, but it is looked upon only as a commemorative of the massacre at Chicago, in which Indians are supposed to have been the aggressors. The large majority of those who pass the group think only of the Indian as a savage warrior, whose hands are full of the weapons of war.

The last survivor of the Pottowatomie tribes, who maintained that he had a title to the city of Chicago, has passed away. It is difficult to find a Pottowatomie Indian anywhere in the region.

Milwaukee is an Indian name, but the bands of Indians which formerly resorted to this place for trade have disappeared. It is difficult to identify the site of the villages which once stood there. The corn fields are covered with great blocks of buildings, and the animal effigies which once could be seen on the bluffs, as signs of the tribal totems, have long since become obliterated. The writer, when a boy, once looked out upon a scene which was touching and very pathetic: A company of Indians and squaws had come back to visit the graves of their fathers, but they could not find them. They gathered not far from the house where he lived, seated in a circle, they drew their blankets over their heads and remained all day long, wailing and lamenting their condition, the rain falling upon them from clouds which were as dark and murky as were their prospects. At the headquarters of the Wolf river are gathered the remnants of the Menominees, a tribe which gave their name to two separate rivers. Alongside of them are the Stockbridges, who formerly dwelt in Massachusetts, among whom the famous divine, President Edwards, spent his last days. The Stockbridges have made removal after removal, and are now gathered under the shadow of the pine trees and around the small inland lakes, hidden from notice and gradually disappearing; while the Sacs and Foxes, a tribe which under Blackhawk made such a struggle for self preservation, have become so reduced that the village in which they live is hardly marked on the map, and it would be difficult for a stranger to find it.

The Sioux, or Dakotas, have given their name to two states, and once held nearly all the land between the Mississippi and the Missouri rivers, land which is divided into three great states—Minnesota, Iowa and Missouri. They are situated upon reservations west of the Missouri river, but are rarely seen by white men. The state of Kansas bears the name of a tribe of Indians which were once very powerful, but it is hard to find a representative of them to-day.

Thus it is that the entire Mississippi valley, a region once occupied by the most powerful tribes of Indians, is filled with a teeming population, the representatives of the different white races which formerly occupied the continent of Europe, with a few representatives from Asia. But to-day the black man is far more in evidence than is the red man, and the question is whether the red man is not likely to disappear altogether.

The tribal lines have been removed by the act of congress, and now individuals own property in severalty, and the question is whether the Indians who formerly held possession of the entire lands on the Atlantic coast and as far west as the Great Plains are not likely to disappear and become exterminated?

At Santa Fè in Arizona, in Montana, in Utah, and in New Mexico there are Indians who once dwelt in great communistic houses and led a sedentary life. They gained their living by irrigation, and they had a patriarchal form of government. At the present time many of the great communistic houses are deserted and in ruins. They are the monuments which show a style of architecture unlike any other in the world, but such havoc has been made of these ruins that congress has made special provision for their protection, though they are deserted houses, and the former occupants are unknown. It may be that the act of congress may lift up a barrier which will protect these ruins from the relic hunters, who like vandals, have been ready to destroy the work of ages, for the sake of the few dollars which they may gain by selling relics to collectors. Still the silence of the ruins shows how many races and tribes who formerly dwelt in this region have already disappeared and left no record behind them. Extermination seems to be the sentence written upon the houses and even echoed among the mountains.

The citizens of America will take long voyages across the Atlantic to the Old World, and then take great pains to visit such ancient monuments as Stonehenge and such earthworks as Arthur's Round Table in England, and the famous standing stones in Brittany and France, and yet are willing that the monuments and earthworks of this continent should go to pieces under the hands of the vandals, and are ready to take the plow and obliterate the mounds and earthworks which are scattered through the Mississippi valley. The beautiful effigies of Wisconsin, which represent what might be called animal

worship which prevailed in that state, are disappearing. The effigies represent the clan totems of the tribes which once dwelt there. They were ornaments to the landscape, and most interesting monuments, for they show not only the art, but the religion of a people who have disappeared. A few of these have been left on the college grounds at Beloit and Waukesha, and in the public parks at La Crosse and elsewhere, but the vast system which covered the soil of Wisconsin and made it a most remarkable place to study the religion of a people who once lived there, are disappearing.

The same may be said of the works of the Cliff-Dwellers and Pueblos. The prehistoric mounds and caves of the middle west have been sadly destroyed. But in that vast arid region designated as the great American desert, covering as it does almost the entire territories of Arizona and New Mexico and the smaller portions of Nevada, Utah and Colorado, are to be found thousands of examples of the wonderful handiwork of primitive communal peoples. Cliff-houses are found there, ruins on the narrow levels of deep and dark cañons, extensive buried houses, partially hidden by the drifting alkali sands which mercilessly hurtle over the lonesome wastes, and one or two examples of stupendous and massive temples, which have proudly held their own in desolation and solitude for centuries, every type of work telling a sad pathetic tale of a race, which in the struggle for existence was combating the most sinister and arid environment of the world.

For a dozen years the Southwest has become a touring point annually for thousands of visitors, attracted thither by the marvelous and eccentric forms of nature, the salubrious climate, the impressive structures of the pueblos, the curious and almost primitive life of their inhabitants, and lastly, the remarkable cliff dwellings of the cañons and the massive temples of the plains. These peripatetic visitors have created a tremendous demand for the art products of the ancient free-holders.

In consequence a new industry has sprung up and every town vaunts its curio and bric-a-brac shop, where a conglomeration of minerals, rare and otherwise; modern Indian paraphernalia made-to-order brand-new basketry and pottery, and often scores and scores of fine examples of art from the sites of ancient buried cities or from the former nestlike homes of the cliff peoples are to be found. Even the solitary trader at the water tank has become afflicted with the bric-a-brac epidemic, and peddles his prehistoric wares through the halted train, to the edification of the passengers and usually to the proprietor's financial satisfaction.

The discovery of the commercial value of such specimens has given rise to keen competition among the traders over this entire region, and the fact that several large collections have sold for fancy sums has stimulated their cupidity so that mer-

cenary collectors have entirely outstripped scientific men in the search for and the acquisition of these articles, and have committed most pernicious acts of vandalism.

The finest and oldest of all ruins in the Union—if not in all the world—has been shamefully mutilated within the last few years: Montezuma castle, a majestic communal habitation, that stands 200 feet up the precipitous cliffs of a branch of the Verde river in northern Arizona.

It is fortunate that the government has taken this matter in hand, and that the monuments and ruins which are situated on land belonging to the United States are to be protected by law, and it is now regarded as trespass for any one to destroy these works, or even take relics from them. But the question is: Are the survivors of the people who built these great communistic houses to continue to occupy these strange houses, and adapt themselves to a change of circumstances, or are they to become scattered and take up the struggle for existence as individuals? Their communistic system is a thing of the past. It is certain that a people who so long dwelt in these remote localities and were so thoroughly organized under a patriarchal government are not prepared to enter the struggle for existence, with so aggressive a race as those who have flocked to this continent from the various portions of Europe. Their government was somewhat similar to that which prevailed in the days of Abraham, and entirely different from the democracy which prevails in this country. It was a theory which gained belief a few years ago, that the Mound-Builders and Indians were the lost tribes of Israel. Le Plongeon, the French archaeologist, maintains that those who built the pyramids and mounds were descendants from Egyptians; but these theories do not solve the problem as to the ultimate fate of the various aboriginal tribes which are scattered over this continent. It remains a question whether they are able to compete with the progress of the age. It is possible that they may become like the remains of the Basque race which are still surviving in the Pyrenees, yet there is just as much likelihood that they will be overwhelmed by the incursions with the population from Europe and Asia, and ultimately disappear.

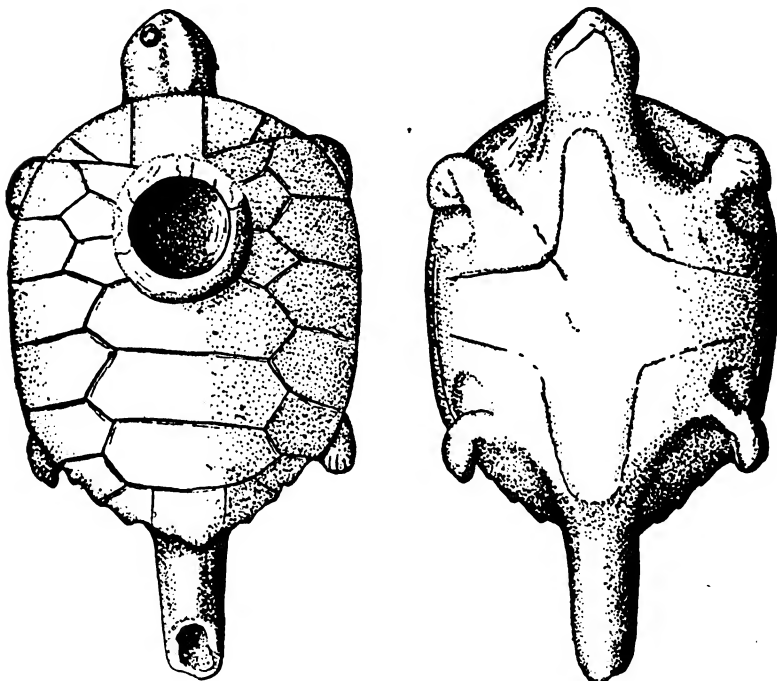
FIRE MAKING AMONG THE APACHES.

The Apaches have a tradition that the coyote and squirrel met. The squirrel was going along on the upper branches of a tall pine tree and was dragging along behind him a fagot of burning cedar bark which fell to the ground. The coyote seized it and ran away and set fire to the world. The coyote taught us to rub the cedar and yucca to make fire. In the religious ceremonies of the Zunis the little God of Fire carries a brand of

burning cedar rolled in cigar shape. The making of a new fire was among them at the winter solstice. Alarcon in 1540 found the tribes near the mouth of the Rio Colorado carrying about with them the same burning brands, and the name of the river was called the "River of the Brand.—*Journal Am. Folk-Lore*.

A TURTLE PIPE.

In the *Bulletin of the Wisconsin Natural History Society*, IV., 1906, pp. 9 ff., Henry L. Ward describes a turtle pipe presumably of Winnebago origin, belonging to the Public Museum of Milwaukee. Turtle pipes are of a form comparatively rare;



TURTLE PIPE.

one was found near Naples, Illinois (J. R. Henderson, *Report of Smithsonian Institute*, 1882, p. 690), and the turtle is represented among the animal forms of the mounds of Wisconsin. It is also included in Squier and Davis's list of animal pipes from Mound City, Ohio (cf. *Ancient Monuments*, p. 152), although omitted from Hodge's list of Pueblo Clan totems.

Mr. Ward says that the upper part or back represents a different species from the one represented by the bottom part, showing that it was not an imitation of any one particular species, but several with which the makers had become familiar. The illustration above shows the form of this pipe.

THE CORN MAIDEN OF THE ABENAKIS.

A long time ago when the Indians were first made, one lived alone who knew not fire but subsisted on roots, bark and nuts. He became very lonesome; at last a beautiful woman with long light hair appeared to him, and led him to where there was some very dry grass and told him to get two very dry sticks, rub them together and hold them in the grass. Soon a spark flew out, the grass caught it, very quickly the ground was burned over. Then she said: "When the sun sets take me by the hair and drag me over the burned ground." She told him wherever he dragged her something like grass would spring up [corn], and he would see her hair coming from between the leaves and then the seed would be ready for his use. To this day when the Indians see the silk hair on the corn stalks, they know she has not forgotten them.—*The American Journal of Folk-Lore.*

THE TWELVE GODS AND TWELVE SUNS.

The Apaches believed that there were twelve gods, which were called Natzaulet. There were also twelve winds, twelve suns and twelve moons, and the earth was divided into twelve parts. All the gods came together, and among them the "black wind," *Ithi*, made the world as it is, the "blue wind" stood by him; the "yellow wind" gave light to the world, and the "white wind" improved the light. Then came the "child of the dawn," *Ikashku*, bringing fruits for the support of the people. He threw out water upon the world, and it became a fog descending upon the earth and made everything to grow. The fruits, trees and plants came forth in the four quarters of the earth. The sun, moon, black wind, yellow wind, and all the other gods held a council and decided to create the many fruits, and also decided upon what things the Apaches should live. The sun cast his rays on the west side of the earth, which brought forth a man who was the child of the water, *Tu-va-dis-chi-ni*. This child had not the appearance of a man, but the black wind came down and gave him all his parts—eyes, nose, etc. Then the sun ordered his servant, black wind, to prepare arms or weapons for him. He gave him a bow and arrows of iron. The man had no clothes, no place in which to sleep, but the sun caused to spring up a sweet, soft grass, a place upon which he reclined and was lulled to sleep.

THE HAWAIIAN ALPHABET.

There are but twelve letters in the Hawaiian alphabet. These, with their pronunciations, are: A (ah), e (a), i (ee), o (o as in ho), u (oo), h (hay), k (kay), l (la), m (moo), n (noo), p (pay), and w (vay). The missionaries added a thirteenth (t,) but the natives won't have it, and continue to pronounce, for

instance, the name of the root from which poi is made "kara," although the missionaries have it "tara." Every vowel in a word is distinctly sounded, except that the vowels "ai" are sounded "i," as in the English. Walkiki, the beach where our soldiers take an ocean plunge during their stay in Honolulu, is properly pronounced "Vikeekee." There is a great difference in the speech of the high and low cast natives. The first call their island group "Ha-va-ee-ee," and the latter begin it all right with "Ha," but conclude with a guttural grunt; and the word heard most, "Aloha," sounds soft and beautiful on the lips of the first, but is a lazy, good-natured grunt when the latter speak it.

GOBELIN IN AMERICA.

Some three hundred years ago a Gobelin tapestry three feet long and two and one-half feet wide was manufactured, and after many vicissitudes it has now become the property of the Metropolitan Museum of Art in New York. It depicts one of Henry VIII.'s unfortunate queens, Anne Boleyn, seated at a table, supporting her head with her hand as if in thought, presumably her portrait of about 1526, the year of her execution. Herren Castle, England, now belonging to the Astor family, contained many Gobelins, and it is interesting to note the reproduction of the chamber occupied by Henry VIII., which was fitted up and devoted to the use of William Astor. There was a Gobelin missing from Herren Castle, and it is possible that this may have been the one. King Edward, to whom the donor and owner, Mrs. Louis Busch, wrote, was unable to give information, but it is an excellent and rare example as a woven picture.

BAMBOO.

In the East Indies bamboo is an article of prime necessity, and its uses are almost innumerable. Perhaps in China, more than any other country, is it utilized, for there the roots are carved into fantastic images, or divining-blocks to guess the will of the gods, or cut into lantern-handles and canes. The tapering culms are used for all purposes that poles can be applied to in carrying, supporting, propelling, and measuring; for the props of houses, the framework of awnings, the ribs of sails, and shafts of rakes: for fences and every kind of frames, coops, and cages; and for the handles and ribs of umbrellas and fans. The leaves are sewed into rain-coats and thatches, plaited into immense umbrellas to screen the huckster and his wares on the stall, or into carvings for the theatre and sheds. The wood, cut into splints of various sizes, is woven into baskets of every form and fancy, sewed into window-curtains and door-screens, plaited into awnings, and twisted into cables. The shavings and curled threads furnish material for stuffing

pillows, while other parts supply beds and mattresses on which to sleep, chairs on which to sit, tables from which to eat, and the the necessary chopsticks therefor, pipes for smoking, and brooms for sweeping. Food to eat, and the fuel with which to cook it, are also derived from this useful plant, as are also furlures with which to govern, books from which to study, plectra for the lyre, reed-pipes for the organ, shafts for soldiers' spears, skewers for the hair, hats to screen the head, paper on which and pencils with which to write, buckets, bird-cages, crab-nets, fishing-rods, etc. The beauty of the bamboo, when growing is comensurate with its usefulness when cut down. This valuable product grows wild at the very doors of the United States.

THE MECKLENBURG DECLARATION OF INDEPENDENCE.

On the 20th of May, 1775, the people of Mecklenburg County, North Carolina, acting through a convention composed of two delegates from each militia company in the county, passed resolutions declaring their independence of Great Britain. That was over a year in advance of the great Declaration of Independence, in which the united colonies made their final protest against their ills. Probably this Mecklenburg declaration was only one of many similar sets of resolutions locally adopted. Be that as it may, the Continental Congress thought the declaration ill-timed and smothered it. So completely did the declaration disappear from any but local memory that when in 1819 the facts were revived and circulated in newspaper accounts, Thomas Jefferson sneered at the whole tale as one of the too numerous hoaxes which he thought North Carolina was contributing to the nation.

George W. Graham, an enthusiastic student of North Carolina affairs, has now gone over the whole story and examined all the evidence of the authenticity of the declaration. The case he makes for it is so strong that Mecklenburg's claim will hardly henceforth be contested.

PRAISE FOR INDIAN SCHOOLS.

BY EFFIE E. SPARKS, FIELD MATRON.

The Picture of Indian sorrow and governmental injustice drawn by Nettie Dixon Hahn in the *Chicago Record-Herald* of August 26th is very pathetic. Only the most stony-hearted of beings would fail to pity poor Lo if his sufferings were so intense as Mrs. Hahn depicts them.

But she speaks well and truly regarding the homeless, unloved white children. Anyone familiar with the Indian schools and also the institution work among white children knows there are thousands of the latter who would be glad to have provisions from the tables of the Indian children in government schools. I agree with her that all needy white children should

have "care, supplies and protection," but the Indian children should have no less than they now have. Should helpless Indian children not have the protection of any law simply because they are Indian children?

The laws of a state permit the county authorities to take children from parents who habitually neglect them, who make no effort properly to feed, clothe and educate them, and who allow them to go hungry, ill-clad and practically homeless.

And what is the average Indian "home," which Mrs. Hahn talks about, like? A tepee or wigwam not high enough to stand within, a fire burning inside on the ground, filling the "home" with stifling smoke (sometimes there is a stove, but oftener not), a pile of filthy quilts, a few dishes and cooking utensils, and over all and about all the vilest, most disgusting filth. The parents in these "homes" live in unspeakable degradation. Their ideas of morality are seldom higher than those of their canine friends, which help to fill the "home" and sometimes the dinner kettle.

Blessed the child "kidnaped" from such "homes" and such parents as these. And blessed be the "smug gentlemen" who have devised plans for educating Indian children, and who have so faithfully carried them out. "Arbitrary" they may be, but can Mrs. Hahn or any one else devise any better plan or use any better method in educating and uplifting the Indians?

In dealing with the Indians and their children I have seen no government employe using "force." In their work among the Indians they are as gentle and humane as it is possible to be, and yet make progress in their work. The employes of the Indian schools are far less dictatorial, exacting and arbitrary than are the employes in institutions for white children, and the discipline in Indian schools is not nearly as strict as is in state institutions for white children.

I have been in the Indian service over five months, and have seen no children under six years in Indian schools. I have seen no "fighting, fainting, broken-hearted" Indian mothers, nor kidnapped children, and no "soldiers with loaded guns." I have not seen any "grieving mothers," and never heard of an Indian child dying of home-sickness. The children are allowed to go home during July and August, and the government pays their parents for bringing them to the railroad station and their carfare back to school when the school is not near their homes.

The parents visit their children at school, and it is the height of absurdity for anyone to say they "mourn their children as dead." Many of the Indian parents I know are proud of the ability of their children to read and write, and they often bring their children willingly to school. Only a short time ago three Indian children were brought to me by their parents to be sent back to school at Wittenberg, Wis., a month before vacation time was over.—*Chicago Record-Herald*.

BOOK REVIEWS.

EDITED BY DR. C. H. S. DAVIS.

THE BOOK OF JOB IN THE REVISED VERSION.

Edited with Introductions and Brief Annotations by S. R. Driver, D. D. Litt. D.

The Book of Job is the masterwork of Hebrew poetry. All the features which distinguish the Proverbs, the Song of Solomon, and Ecclesiastes from the prophetic books are found in it. Says Carlyle, "I call the Book of Job one of the grandest things ever written with pen. There is nothing written, I think, in the Bible or out of it, of equal literary merit." Froude calls it "a book which will one day, perhaps, when it is allowed to stand on its own merits, be seen towering far above all the poetry of the world." With reference to its object much has been said, and scholars are not all agreed. Cheyne says, "I would entitle it, 'The book of the Trial of the Righteous Man and the Justification of God.'" Says Dr. Driver, "The Book of Job deals in particular with a problem of human life; in modern phraseology, it is a work of religious philosophy." We know no better interpreter of the Book of Job than the Regius Professor of Hebrew at Oxford. The English reader will find nothing like it elsewhere for the understanding of this book. The aim of Dr. Driver is to explain the Revised Version of the Book of Job in such a manner as to make the poem intelligent to an ordinary educated reader. Dr. Driver gives great attention to the marginal readings, which he considers gives correctly the general sense of the poem. But he has given also an exceedingly interesting introduction, and the very complete and lucid notes often throw a new light upon the text. Some partly obsolete or archaic expressions are explained; for instance the use of saint instead of angel. In order to understand a sentence properly, it is sometimes of consequence to know what the emphatic word in it is. In Hebrew it is often indicated by the position which the word holds in the sentence. And sometimes the emphatic word, if a personal pronoun in the nominative case, is indicated by its being separately added. The reader of the English Bible has no clue as to which the emphatic word is, in the sentence. Dr. Driver makes it a point to call the reader's attention to the emphatic word. On the whole there is no better

work to place in the hands of the reader who desires to fully comprehend and appreciate the Book of Job, or Iyob, as the Hebrew has it.

(Oxford. The Clarendon Press. New York. Henry Froude, 91 Fifth Ave. 8 vo. pp. xxxvi-132. Price 85c.)

"Hindu Manners, Customs and Ceremonies," by the Abbe J. A. Dubois. Third edition. This valuable work, translated by Mr. Henry K. Beauchamp, has become a standard authority, for it is a book of unusual importance and standard value. It is a hand book, written out of personal experience, and every one who desires to become acquainted with the manners and customs of the inhabitants of India at the beginning of the nineteenth century, should read it. Here one will find the Hindus as they really are, for the same ancestral traditions and customs are followed nowadays that were followed hundreds of years ago, at least by the vast majority of the population. Among the Hindus themselves the work has been received with universal approval and eulogy.

In an article in the May Bulletin of the American Geographical Society, entitled, "Recent Archaeological Discoveries in Northwestern America," by Harlan I. Smith. The writer says: "Experience shows the advisability of conducting archaeological work in co-operation with students of living tribes. A study of the Indian living in the country under exploration usually throws light on archaeological "finds" made there. The continuity of the historical problem is met with a continuity of method." In selecting fields of operation it seems best to continue explorations in an area so distant from one already examined that new conditions will be encountered. This will make it probable that new facts will be discovered, if not a new culture area. At the same time the new field should be so near to the old that no culture area may intervene. Thus the culture boundaries may be determined and new areas discovered. Exploration carried on by this continuous method makes the experience already gained of service in a new and adjacent field while discoveries in such a new field may lead to a better understanding. "It remains to determine the northern, eastern, and southern limits of the general plateau culture, how far it may be subdivided into local areas, and interrelation of these with each other and without outside areas." Specimens are few from the whole region lying between the mouth of the Columbia, the Santa Barbara Islands, the Cliffs and Pueblo region of Arizona and

New Mexico, and the Mound region of the Mississippi Valley. Literature on the archaeology is scanty. The whole region north of the Arctic and all that of the plains towards the east and south throughout the plateaus and Nevada remain to be explored."

Professor Fossey, who has just been appointed Oppert's successor at the College de France, has recently published a most useful work entitled, *Contribution au Dictionnaire Sumerian Assyrien* (Paris: Leroux), which consists of an exhaustive list of the phonetic values and ideographic signification of Assyrian characters contained in the lexical tablets published by the British Museum or elsewhere since the appearance of the monumental work of Brunnow. In the June *Expository Times* Prof. Sayce calls attention to one of the entries in Prof. Fossey's work which ought to be of interest to Biblical Scholars. According to the legend of Eridu, "the good city," near which the Babylonian Garden of Eden was situated, the name of the first man was one which has been hitherto read Adapa. Several years ago by Prof. Sayce suggested that the name might really be Adamu, basing the suggestion on the fact that at Dilmun the character *pa* seems to have the value of *mua*. Now, the suggestion has been unexpectedly verified. One of the glosses published by Prof. Fossey states that the character had the ideographic meaning of "man,"—a fact already known to us from the early Babylonian texts,—and that with the meaning it possessed the phonetic value of *mu* in the Eme-tena, a "language of the commonality." As one of the principles which governed the transcriptions of names and words in Sumerian was the selection of characters which expressed the sounds which also expressed or harmonized with the sense, the last syllable of a name like that of Adamu, the first man, would naturally be represented by an ideograph which not only had the phonetic value of *mu* but also signified "man." Hence forward, therefore, we must transcribe the name of the first man of Babylonian tradition, not A-da-pa, but A da mu.

Adamu has been found by M. Thureau Danguin used as a proper name in tablets from Tello, of the age of Sargon of Akkad (*tablettes Chaldeennes inedites*, p. 7), and Prof. Delitzsch quotes a bilingual text in which Adan is interpreted "man," a word, borrowed from the Sumerian. In Sumerian Adam signified generically "animal" and specifically "man." Thus a list of slaves published by Dr. Scheil is dated in "the year when Rim-Anum, the king, (conquered) the land of ...bi and its

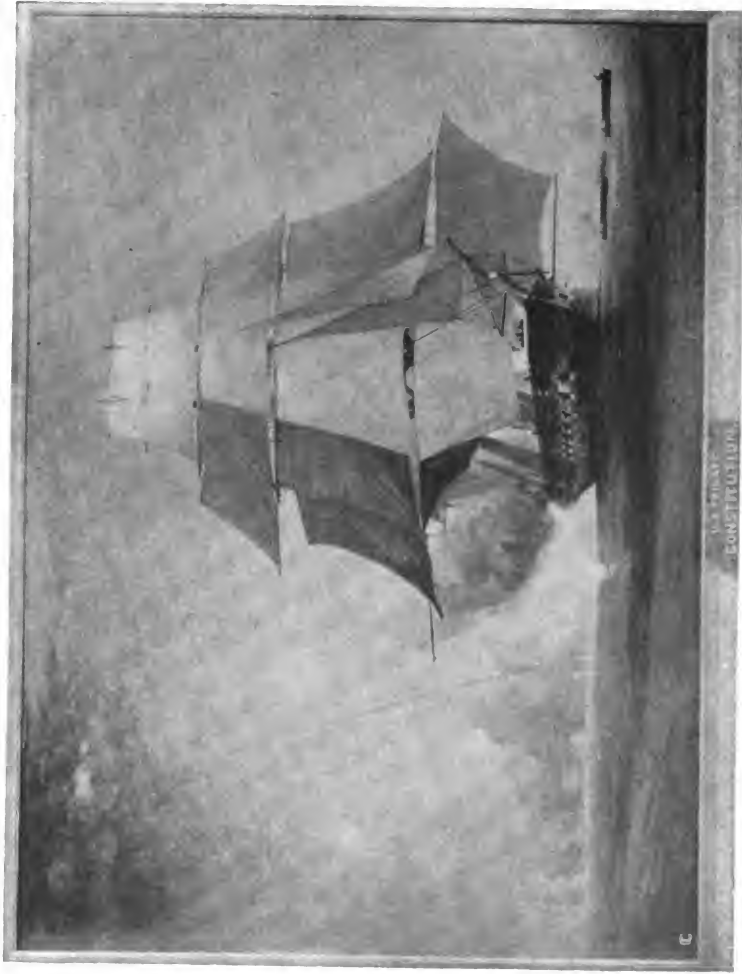
inhabitants," (Adambi), In the table of the Antediluvian kings of Babylon given by Berosus, "Alorus of Babylon," takes the place of Adamu of Eridu, but it is significant that the third and fourth kings are Amelon, i. e. Amelu, "the man" of Panti-bibla or Sippara, and Ammenon, i. e. Ummanu, "the craftsman" of Chalde who correspond with the Biblical Enos, "man" and Cainan, "smith."

To Jerusalem, through the land of Islam, among the Jews, Christians and Moslams, by Mdm. Hyacinthe Loysen.

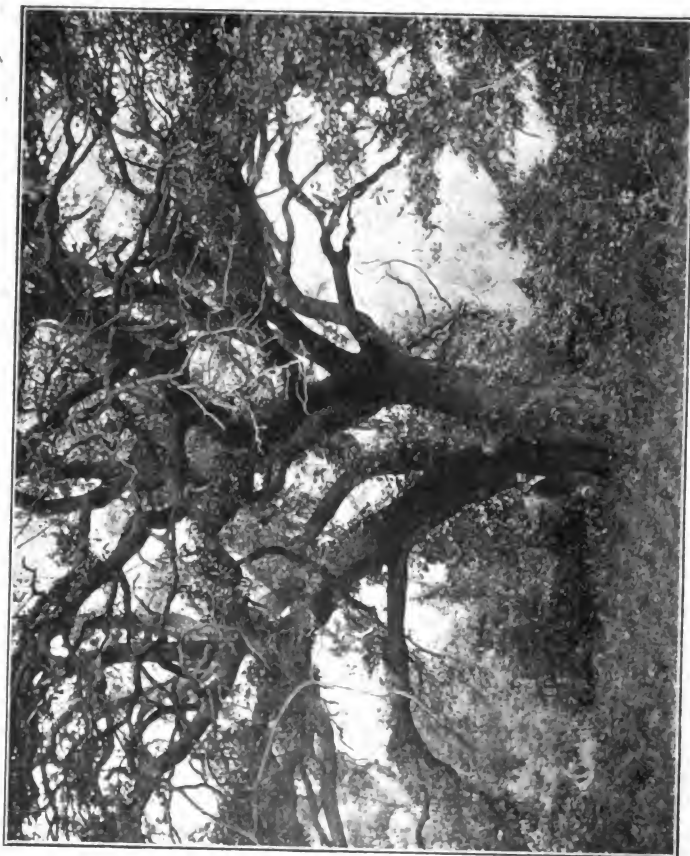
The Open Court Publishing Company, Chicago, Ill., 1905.

The comparison between people of different faiths, all of them in the lands of Islam is given in this book. It is a comparison that is influenced very much by sentiment, a sentiment which was brought out by the silence of the desert, the great stone pyramids of Egypt and by a voyage of the Nile and a view of the temple of St. Sophia, by a visit to the Grand Mufti of the high blooded Arab race. She says my slow, hard English seemed brutal, compared with his slow pathetic speech. Her view of Islam is rose colored, a great republic, a universal brotherhood, where the laws are so merciful, charity and patience are their cardinal virtues, crowned with resignation. Science is a pastime, it ranges from electricity to music. She speaks of Musslemen, as one who, in looks, manner and speech is a perfect representative of the Old Testament and says in Tunis, that intellectual activity vies with a decided progressive spirit. * * * Admiration for everything that is seen in the east is expressed by the author, even for the Sultan, for his effeminacy and the Turk with all his cruelty, are admired and even represented as believers in Christ, and defenders of the faith.

The book is well illustrated and nicely printed and bound.



THE SHIP "CONSTITUTION" REBUILT.



THE POWHATAN TREE.

THE
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No. 6

THE JAMESTOWN EXPOSITION AND THE EVENT WHICH
IT COMMEMORATES

There were four events in American history which will always remain as the most important that have occurred. The first bears the date of 1492 when Columbus discovered America. The second was the first English settlement of Jamestown, which occurred in 1607. The third was the landing of the Pilgrim Fathers in 1620. The fourth occurred in 1776, when the Declaration of Independence was signed. This event is celebrated by the entire nation every year. The event of the discovery by Columbus was celebrated at Chicago in 1892 and 1893, but the English settlement at Jamestown harbor is to be celebrated for the first time in 1907, three hundred years after the event occurred.

It was an important event, for by it was decided the question whether an English-speaking people should take possession of the continent of some other nationality.

Jamestown may be called the birthplace of the great American nation, for it is the first place where buildings were erected and homes secured, and the tokens of remembrance of the event are still in existence. It is true that the Plymouth Rock still remains, as the place on which the Pilgrim Fathers first planted their feet, and is called the corner-stone of the American republic; but Jamestown may also be considered as another corner-stone, for here were gathered those who spoke the English language, and have spread west from that locality. The story of the first winter of privation and hardship, is well known, but the story of Powhatan, the Indian chief who spared from the storehouse of corn enough to supply the wants of that little colony, will be remembered. The story of Pocahontas the Indian maiden, through whose entreaty the life of Captain John Smith was spared, does not cease to charm those who read it. There is no place more precious to the citizens of this entire land than these which have been mentioned.

The prospect of visiting Jamestown harbor and meeting those who are interested in the history of our country is looked forward to with interest by all true patriots. The Jamestown Exposition cannot fail to arouse the spirit of patriotism in every American citizen, no matter where his birthplace was, or what language he may have spoken.

The students of early history will delight to look upon scenes which have become familiar to them, although the majority have never set eyes upon the spot.

There is still growing in the midst of those scenes the tree which is called the Powhatan Tree, and is said to be the very one under whose shadows the tragic event occurred, in which the life of Captain Smith was spared. There are rustic scenes and many reminders of the paths which were trodden, not only by the native chiefs, but by the white men who had made their homes in the new world. More than this, that grand old vessel, "The Constitution," which has so long remained in Boston harbor near the Navy Yard at Chelsea, as a reminder of the struggle on the high seas, will be rehabilitated and, with all sails set,



ROADWAY BY THE RIVER.

will appear in its original majesty. It is proposed to restore her to the same condition in which she was, when, under Hull, Bainbridge, and Stewart, she roamed the Atlantic. At present the ship is in the hands of the Bureau of Construction and Repair. Until recently she has been moored to a pier at the southern extremity of the Boston Navy Yard. Her masts and spars have long since been removed. A roof has been built over her spar, to further protect her from the elements, and the ship is now serving as a museum of relics of the battles in which she engaged with uniform victory.

"The Constitution" is 176 feet in length and 42 feet in width. She has a normal load draft of 1,970 lbs. No ship either ancient or modern has had so glorious a career as "The Constitution." The ship, and the old tree, with its wide-spreading branches and the vines crawling up

its trunk, together constitute monuments of the past. They form an object-lesson for the present. Under the shade of this tree a conference was held between the settlers and Captain John Smith. The spring from which Pocahontas was supposed to have drunk is still running, and brings up the memory of the fair Indian princess and of John Smith. Near the spring is a rustic bridge, and from the roadway are gained glimpses of the sylvan groves, which bring recollections of the romantic scenes of history.

The Indian chiefs who boasted that they were the sole possessors of the land are no longer on these shores. Scarcely a representative remains amid these scenes, but in the far distant West there are tribes who have the same blood flowing in their veins. It is a place where history will repeat itself.

A monument will be erected by the government, at Jamestown Island, where the first colony landed. The shaft, which is to be of granite, will rise one hundred and three feet, from an ornamented base composed of fifteen broad steps. On the base the following inscription will appear: "May 13, 1607. Upon this date English colonies landed here." Upon the pedestal will be a plate, engraved: "To commemorate the Jamestown landing." The monument is important but the event which it is to commemorate is far more so, for it is not merely the landing of a single vessel in Jamestown harbor, but it is the entire history of the nation which is to be remembered.

It is strange that in so short a time so great a nation has arisen—a nation that stretches from the Atlantic to the Pacific Ocean, and is now sending its representatives across both oceans, and to all parts of the world, and, what is more, is destined to carry the fruits of civilization to those of all tongues and all climes.

We know not what events will occur in the future, but the steps of human progress are hastening forward, not only on sail vessels, similar to those which anchored in this harbor, but other vessels which are propelled by steam, and filled with multitudes who are bearing the fruits of civilization to distant lands. The great nation with conquering steps is bound to reach a stage of progress and a height of civilization which was not dreamed of at the time when history began. The unity of the nation is its greatest strength; liberty its greatest privilege; progress its greatest glory.

The spirit of the nation will be illustrated by the following incident:

The Norfolk people did not declare their independence; they expressly affirmed their wish to be subjects of King George III. They merely declared that there should be no taxation without representation. Among the many prominent Norfolk names attached to the document are Henry Tucker, Robert Tucker, Robert Tucker, Jr., Maximilian Calvert, Thomas Butt, Thomas Willoughby, John Taylor, Jr., Joseph Hutchings, Jr., and James Parker. The resolutions adopted read as follows:

"Having taken into consideration the evident tendency of that oppressive and unconstitutional Act of Parliament commonly called the Stamp Act, and being desirous that our sentiments should be known to Posterity; and recollecting that we are a part of the colony who first

in General Assembly openly expressed their detestation to the said act (which is pregnant with ruin and productive of the most pernicious consequences) and unwilling to rivet the shackles of Slavery and Oppression on ourselves and millions yet unborn, have unanimously come to the following resolutions:

"1. *Resolved*, That we acknowledge our Lord and Sovereign, King George the Third, to be our rightful and lawful king and that we will, at all times, to the utmost of our power and ability support and defend his most sacred Person, Crown and Dignity; and shall always be ready, when constitutionally called upon, to assist his Majesty, with our lives and fortunes; and to Defend his just rights and Prerogatives.

"2. *Resolved*, That we will by all lawful Ways and Means which Divine Providence has put into our hands, defend ourselves in the full enjoyment of, and preserve inviolate to Posterity, those inestimable privileges of all freeborn British Subjects of being taxed only by representatives of their own choosing; and of being tried by none but a jury of their Peers. And that if we quietly submit to the execution of the said stamp act all our claims to Civil Liberty will be lost, and we and our Subjects in America are deprived of the invaluable Privileges aforementioned.

"3. *Resolved*, That a committee be appointed who shall in such manner as they think proper, go upon necessary Business and make public the above Resolutions, and that they correspond as they shall see occasion with the Associated Sons of, and Friends to, Liberty, in the other British Colonies in America."

As a result of the adoption of these resolutions Lord Dunmore, who commanded the British fleet off Norfolk, made a demonstration before the city, and several shots were fired from the frigate "Liverpool" and a couple of sloops-of-war which accompanied her.

This incident can be well compared to the scene which took place in Boston harbor, when the liberty-loving citizens clad themselves in garments to resemble Indians, mounted the sides of the vessel which lay in the harbor, and threw the chests of tea into the water, protesting in this way against taxation without representation, and thus echoing the sentiment which was expressed by those living in Jamestown harbor.

The rejoicing will be all the greater from the fact that the great nation is everywhere united. There is no North and no South, no East and no West, but a happy people may gather at the birthplace of the nation and realize that they belong to one great family.

There will arise in the minds of many the history of the past, visions of the great possibilities of the future, and gratitude for the realities of the present. In the vision there will appear the floating palaces, and great mercantile ships and men-of-war, which have taken the place of the little vessels which sailed many years ago into Jamestown harbor. There will also arise visions of a great continent, which is girdled by iron rails, over which great trains drawn by swift locomotives pass from sea to sea, crossing the broad prairie and the high mountains, and uniting all parts of the continent by the closest of all bonds. The blue waters of the Atlantic Ocean will send greetings to the rolling waves of the greater Pacific; the Golden Gate will be open for those nations who live beyond

the ocean to come and visit the birthplace of the great American nation.

It was from Sewell's Point, near the site of the exposition, that the English first saw Chesapeake Bay, which the Chesapeake Indian told the white man signified the "mother of the waters." Captain Ralph Lane, during the winter, set out with a few companions to explore the country to the northward, and there discovered the Chesapeake Indians. This was a tribe of four hundred fighting men. When Lane came to Sewell's Point they were encamped at that point with their tepees spread out in a wide circle. There are old pictures which show the character of the village and its surroundings.

THE HISTORY OF THE HEBREW ALPHABETS.

BY HENRY PROCTOR, M.R.A.S., A.V.I.

The theory of M. de Rougé of the derivation of the Phœnician from the Egyptian alphabet,¹ though accepted by some archaeologists, does not appear to rest on any certain foundation.

There are two weighty objections against it which only the strongest evidence of resemblance could possibly overthrow: (1) the Egyptian letters represent objects, the names of which begin with these letters; similarly the Phœnician had names indicating an origin from a hieroglyphic system on the same principle of acrophony. If the Phœnician letters were derived from the Egyptian these names would describe the original signs. This, however, is not the case in a single instance. *Aleph* signifies an *ox*, *Beth*, a *house*, and so on to the end; (2) the oldest monuments of the Phœnician alphabet were found, not in Egypt, but in Palestine and Assyria, such as the stele of Mesha and the Nimroud Lion weights.²

The discoveries of Professor Petrie at Abydos have furnished us with a still more perfect refutation of the De Rougé theory.

"Symbols closely resembling the alphabetical characters are found to have coexisted in Egypt even before the first dynasty of Egyptian kings known to history, and the usage of such forms from 6000 B. C. to 1200 B. C. or later, shows that we have to deal with a definite system, and it seems impossible to separate those used in Egypt from the similar forms found in other lands connected with Egypt from 800 B. C. down to later times. We may find many of these also in the Cretan inscriptions before 800 B. C. Professor Petrie concludes that the Phœnicians specialized as alphabetic signs those which had been used as numerals, out of a large body of symbols which had been in use from prehistoric times around the shores of the Mediterranean, and this specialization, he thinks, was the starting-point of the alphabet as we now know it.

But this theory of a numerical origin of the Phœnician alphabet does not in any way explain the *names* of the Hebrew letters. These names, the meanings of nearly all of which can be found in any Hebrew

¹ Vide Deecke, *Der Ursprung der kyprischen Sylbenschrift*.

² *The Royal Tombs of the First Dynasty*, Vol. I, 1900.

lexicon, certainly indicate a hieroglyphic origin with which the forms of the Hebrew square alphabet are much more closely allied than are the Phoenician.

For example the Hebrew *Beth* ב is much more like a house than the corresponding Phoenician letter, and while the *gimel* ג of the Siloam inscription bears no resemblance to a camel, the hieroglyphic camel can easily be traced by closing up the letters of the Hebrew word גמל *gimel*. *Nun* final ן also bears more resemblance to a fish than the ן *nun* of Baal Lebanon, and פ *Pe* is more like a mouth than the Siloam letter, and the Hebrew *Shin* ש represents teeth better than the Phoenician letter.

Professor Petrie's evidence is just as much against an Assyrian as an Egyptian derivation for the Phoenician alphabet,³ for he remarks that: "There is no evidence whatever that the Phoenician alphabet was of Assyrian origin, and such evidence, if discovered, must carry back the Phoenician alphabet thousands of years earlier than any date which can at present be established for its existence."⁴

The Hebrew square character, which is said to be of Chaldean origin, differs very considerably from the Samaritan (*Proc. Soc. Bib. Arch.*, May, 1897, Plate II); so much so that it seems clear that they are two distinct alphabets, and that the one is not, as some might suppose, a development of the other. On the other hand it seems just as certain that all the rest of the alphabets given with Mr. Pilcher's excellent monograph on "The Date of the Siloam Inscription" (*Proc. Soc. Bib. Arch.*, May, 1897) are developments of the Phoenician alphabet. So that we must separate, in our minds, the Phoenician alphabet from the Hebrew square character. The latter has been said (without any sort of proof) to be a comparatively modern alphabet. But at the present moment we have no reason to believe that it is of later origin than the Phoenician. It is certain that it approaches more nearly than the Phoenician to those hieroglyphic forms which are suggested by the names of the letters, which might be taken as an argument for greater age. It has been asserted that the greater part of the Jewish Scriptures *must* have been written in the alphabet seen on the Moabite stone and in the Siloam tunnel. But of this we have no proof; on the contrary in the Nash Papyrus, which is said to be "the oldest known fragment of any biblical text" (*Proc. Soc. Bib. Arch.*, January, 1903), is still in the Hebrew square character. I would suggest, therefore, that this character was always used for the sacred writings, while the Phoenician was used for inscriptions on stone, seals, and coins. Thus the Hebrews would have at the same time a sacred script (corresponding to the Hieratic), and a secular (corresponding to the Demotic).

(1) In our consideration of the hieroglyphic meaning of each separate symbol we find that the first letter of a word is often used as a determinative prefix. So we obtain the meaning of the word אב *av* "father," as man of the house. It is interesting to compare *Aleph*

Proc. Soc. Bib. Arch., Vol. XX, p. 216.

The Royal Tombs of the First Dynasty, Vol. I, 1900.

with the Demotic sign for "man," and with the cuneiform, and also with the Egyptian hieroglyphic.

We may further note that all the Hebrew words for "man" begin with *Aleph* as Adam, Enosh, and Ish.

The use of this symbol is further illustrated in such words as אבד *abad*="lost," which is signified by the pictures of a man (*Aleph*) outside the house (*Beth*), with the closed door (*Daleth*). So likewise בך a house (*Beth*) with closed door (*Daleth*) signifies "solitary, alone."

ג

(2) The figure of the camel is most interesting, being formed of the word itself, viz., *Gimel*—or *Gamal*—written גמל, in which it is easy to discern the hieroglyph גכל.

ג

(3) The ג is the symbol of the camel itself, from the height of which animal is derived the idea of loftiness, pride, and glory. Examples: גג *gag*="a roof"—the height of the camel doubled; גאה "to grow high become lofty, powerful, proud;" גבה *gavah*, "proud," גבר "powerful, hero," גדל "great."

ד

(4) The ד is equally interesting. It represents a closed door. Knowledge, for example, is signified by דע—an eye within a closed door. A witness or testimony is represented by an eye outside the door עד, signifying the understanding of secret things. It has the significations of privacy, loneliness, and secrecy, which last is illustrated by דומ *dum*, meaning "silent," like our word "dumb."

ה

(5) ה "a window," is used to express light and brightness, as in נהר "to brighten" (Isa. 60:5 and Ps. 34:6), for a flowing stream and the light of day; להט *lahat*, like our word "light," meaning "luminous;" נדב *nav* "light of a lamp;" זרר "to enlighten, radiant;" זהב *zahav*="gold."

ו

(6) ו is a hook, and is used therefore as a conjunction, as "and, but, moreover." It gives the idea of permanency, continuation, and as a shepherd's crook, of peace (ו a hook).

ז

(7) ז "the sword," denotes rapine, violence, brightness. Thus the word בז "the sword in the house," denotes spoil, prey. Examples: זב "a wolf;" זבח "slaughter;" זרז "penetrating power of lightning."

ח

(8) ח "thorns" (Syriac alphabet—Estrangelo), denotes "sharpness, suffering," as חר "a sharp point;" חך "a spear;" חץ "arrow;"

* Michaelis, "Grammatica Syriaca," Assemanus, T. III biblioth. Or., Pt. II, p. 378.

הק "to engrave;" היל "to wound," and הל "sickness;" הוד "keen;" הרט "engraver;" הרב "a sword."

ט

(9) ט "the serpent," signifies "deception, deviation, twisting, writhing." Examples: אט "man with a serpent, necromancer, enchanter; gently, softly, slowly;" הט "to deviate." *Khāta* = חָטָא "to miss the mark, to err, to sin." *Sin* therefore is expressed by the symbols: (1) thorns; (2) serpent; (3) man, e. g., the thorns which the serpent brought to man. Other examples are: הרט "a twisted thread; שרט "revolt, apostatize;" שטן "Satan, the revolter."

י

(10) י "the hand," or "flame of fire" = power, virtue, ability. The hand is constantly used as a symbol of power, e. g., "by a mighty hand" (יד). As a flame of fire it is used in *yāpha*, יָפַע "to irradiate, shine forth" (Ps. 80:1 and 114:1). As the first symbol in the divine names—יְהוָה and יֵשׁוּעַ "Jahveh" and "Jesus."

ל

(11) The ל which is the forepart of the camel, walking, is used as a symbol of motion like the Egyptian Δ and the Archaic Babylonian "to go, walk, or stand," and equals the prepositions "to" and "toward" in our language, and is the central letter of חֲלַךְ = *halakh*, which means "to walk, to proceed, or make progress in any manner."

מ

(12) The מ which forms the *body* of the camel, is used as a symbol of substance. When affixed to an adjective, therefore, it gives *body* to it, making it a substantive; thus from קדש "holy," we obtain מקדש "sanctuary," and from זבח "sacrifice," מזבח "altar."

נ

(13) נ "the palm of the hand," signifies to cover, to conform, to adjust; examples: נב "to cover, extinguish," נה "to conform;" נ "as, like;" נס "to cover over;" כור "a measure of capacity;" נפר *Caphar*, "to cover, to atone, expiate." נפר "expiation."

ן

(14) נ "a fish," also "perpetuity, rest, dwelling;" examples: נוח "rest;" נים "numb, slept." Compare the ideogram of *Nineveh* from the cuneiform.

ס

(15) ס "the firmament," denotes circularity, rotundity, revolvency, and as a final, speed, swiftiness.⁷ Examples: סב "to surround;" ספר (סבב) "a circuit;" סיר "a globular caldron;" ספר *sepher*, "book" (that is, a roll containing the torrent ר which flows from

⁷ Gesenius derives *ṣāḥ* from Arabic *ṣāḥ* = "serpent."

the mouth פ). Final ס "fleetness;" סוס "horse, swallow, crane," and also "fleeting, disappearing, melting;" פסס "cease to exist;" סס "consuming moth;" נס "to melt away the *body* or *substance* of anything."

(16) ע *ayin* "the eye," denotes intellect, wisdom, knowledge; עץ *ets*="tree of wisdom and death," or "the knowledge;" דע "of good and evil;" עיר "awoke;" עיר "a watcher" (Dan. 4:10); compare the Egyptian and the old Babylonian symbol.

פ = Mouth

(17) פ *phi*="sideface, mouth"=פה, Chaldean פזס "mouth, aperture, edge, corner, division;" פאה "corner;" פוה "blew, puffed;" פלג "divided;" פטר *patar*, "to open, to expand;" פלה "to separate;" פלה "to cut;" פנה *pānah*, "to turn;" פנה *pāneh*, "the face;" פן "pen," and פנה *pinnah*, "a corner."

צ

(18) צ (final צ) "anguish, death, perdition;" tsadi="side, hunting, venison;" צוד, "pursued, hunted;" קיץ *küs*, "summer"="rising from death;" קוצ "resurrection;" קצץ "cut off;" קץ "end, ruin;" רצץ "bruised, broken, crushed."

ק

(19) ק from the full face, parent of Q, denotes "to collect, to revolve, bring about again, rise, resurrection, qualm;" thus קא "sickness;" קם *kūm*, "to arise;" קבץ "collected;" קש *kash*, "collect, stubble, chaff."

ר

(20) ר (1) "head," (2) "torrent, decending stream;" רר "running downward;" רץ "to run;" קרה "running together;" חרר "quick-darting rays of the sun;" ריק "to run out, empty, hungry, poor;" דר "freedom, free flight;" דור "series, generation;" דרדר *Dardar*, "a thistle." Multiplying פרי "fruitful;" רב "much, great;" רבב "to become many, numerous;" רבה "multitude."

ש

(21) ש *shin*, "teeth," whence, "change, renewal, purity, joy," from them, "whiteness;" שש "the lily," also "white marble;" שנה "to repeat, change, year;" שנים "two;" שיש "joy;" ישוע "Jesus"="light, purity, wisdom."

ת

(22) Tav is a mark or sign: Ezek. 9:4. From the mark (τ=tau) put upon the necks of camels the Greek letter τ is derived. תא="ploughshare;"⁸ Estrangelo "a plough, to cut, to distribute;" פת "portion;" פתח "to break in pieces;" פתר "to explain, open

⁸ Maspero, *Dawn of Civilisation*.

out;" כח "pounded to dust;" תרגם *targum*, "interpretation;" מת "death, the body separated from the soul."

We may remark here on the order of the letters, that they fall into groups. First, the man represented by *Aleph*, then his house (*Beth*), his substance represented by the camel (*Gimel*), the door of the house (*Daleth*), the window (*Hē*), the hook (*Vāv*), fastenings, his weapons for defense of the house (*Zayin*), the fence surrounding the house (*Kheth*), and the enemy outside the house (*Teth* the serpent). Then a group of members of the body, such as the eye (*Ayin*), the mouth (*Pe*), the face (*Koph*), the head (*Resh*), and teeth (*Shin*).

Adam is probably the oldest known word for man, derived, according to Dr. Pinches, from the Accadian. It seems probable therefore that the *Aleph* of Adam, which is written in *ish* and *enosh* but not pronounced, was originally a determinative prefix.

We have every reason to believe, therefore, that the Hebrew square character was derived directly from hieroglyphics and not from the Phœnician or any other existing alphabet. The Crimean inscriptions prove that it was in use in the Northern Kingdom before the first deportation of the Ten Tribes in 721 B. C., and as it could not possibly have originated then, before that for an unknown period. If it was in use in the eighth century B. C., there is little reason to doubt that it was used by the great lawgiver Moses, and that it was always used by the Hebrews for sacred purposes, while that which they borrowed from their Phœnician neighbors was used for secular purposes.

A BABYLONIAN TOURIST OF THE ABRAHAMIC AGE AND HIS MAP OF THE WORLD¹

BY A. H. SAYCE, D.D., LL.D., PROFESSOR OF ASSYRIOLOGY, OXFORD

The twenty-second volume of *Cuneiform Texts from Babylonian Tablets in the British Museum*, recently published by the Trustees of the Museum, contains in Plate 48 a document of the most curious and interesting character, which had already been published in a less correct form by Dr. Peiser. This is an early Babylonian tourist's description of the world, with an accompanying map, as it was known (or supposed to be known) to him. In the Descriptive Index of the Plates the work is said to belong to "the late Babylonian period;" this, however, is a mistake, as it was copied in the Neo-Babylonian age from an "ancient" document. It is at least as old as the Khammurabi period; possibly a good deal older, since no mention is made in it of Amurrû, the land of the Amorites in Syria and Palestine, which was known to the Babylonians as far back as the time of Sargon of Akkad (3800 B. C.). Nor is Susa named, though this city also formed part of the empire of Sargon and his son Naram-Sin. On the other hand, Babylon—under its primitive name of Din-Tir, or rather Tir-Din—occupies a position near the center or omphalos of the world, and is already the capital of Baby-

¹ Michaelis, *Assemanus T. III biblioth. Or.*, Pt. II, p. 378.

² Abridged for an article in the *Expository Times*, London, pp. 71.

lonia, while its patron-god Merodach is the creator of the monsters of the sea. Sargon, too, has become a hero of the past.

It will be seen from the translation that the document has a bearing upon the geography of the Garden of Eden, and is therefore of interest to students of the Old Testament. Unfortunately, the tablet is much broken, which adds considerably to the difficulty of translating it. Some of the lost words and sentences, however, can be restored.

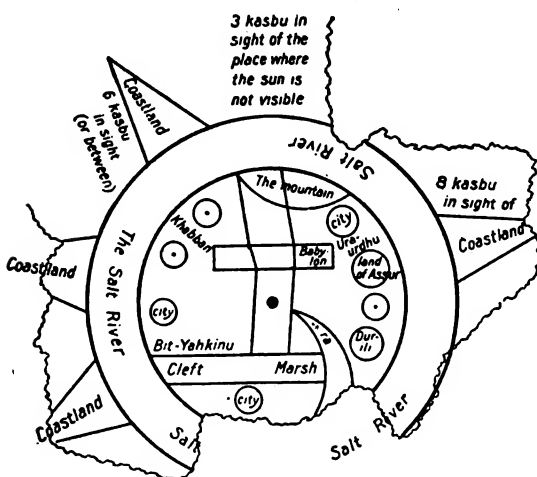
Only the concluding paragraph of the Obverse is preserved, along with the map of the world. What is left of the paragraph reads as follows:

..... cities *aptu[lu]*
 [the creatures?] which they catch (?) [which] Merodach in the
 se[a created]
 and the gods *aptutu* who [dwell] in the midst of the sea;
 [on] its [shore?] they are set, and in the water the great serpent
 in the midst of the deep makes [war];
 [wild] beasts (namely) the gazelle, the *abšašū*, the leopard, the
ki-sa[šū],
 the lion, the hyaena, the ram, and cattle (?),
 . . . , the hippopotamus (?), the *tasmu*, the *suranu*, the breed of
 Babylon, . . .
 . . . the creatures which Merodach created upon the tossing sea,
 [where dwell] the deified Utu-napistim, Sargon, and Nur-Dagan
 the kings, at the mouth [of the rivers]

The *appi iistsuri*, or "beak of a bird," is explained by the map, where a branch of the "Salt River" or ocean-deep beyond the mouths of the Tigris and Euphrates has the shape of a bird's beak.

The word *nagû*, which is borrowed from the Sumerian *nanga*, signifies "a coastland," and corresponds with the Heb. נָחַל. The map shows that the 7 *nagû* were supposed to rise up like cones on the farther side of the encircling ocean. This explains the passage in the story of the Deluge, which has been hitherto

misunderstood: "At a distance of 12 (*kasbu*) rose a coastland (*ana xii. TA an itelâ nagû*); at the mountain of Nizir stopped the ship." This mountain of Nizir is called "the mountain" in the map, and was the



AN ANCIENT MAP OF THE WORLD

hither side of the ocean-stream; on the farther side of the ocean, at a distance of 12 *kasbu*, according to the Deluge story, rose the northern *nagû* or coastland, behind which the sun became invisible.

That the description of the world purports to be derived from the personal explorations of the writer is clear from the account of the fifth coastland, the only one which is described in detail.

Muskhush-gal, "the great serpent," was the ancestor of the modern sea-serpent; cp. Is. xxvii. 1. The line seems to end with *yu-gir-[rî]*, "he is hostile."

Since a *pagutu*, or *pagitu*, was sent to Assyria by the Egyptian king along with a crocodile, the word may mean a hippopotamus.

The ancient king, Nur-Dagan, is otherwise unknown. As his name follows that of Sargon of Akkad, we may assume that he lived at a later date than the latter. The fact that Sargon has already become a hero translated to the Island of the Blest shows that the narrative could not have been composed in his reign, nor indeed in his age.

The hero of the Deluge is called deified. In the epoch of Gilgamesh this hero Utu-napistim and his wife are said to have been carried afar off by Bél to dwell at the mouth of the river. At a distance of 12 *kasbu* rose a coastland; at the mountain of Nizir rose the ship. This mountain of Nizir is in the map called "the mountain" and was the hither side of the ocean stream. According to the Deluge story the northern *nagû* or "coastland" rose behind which the sun became invisible. The description of the world purports to be derived from the personal explorations of the writer.





The lost portion of the Obverse would have contained his account of the *terra cognita*, that part of the world which was surrounded by the ocean-river. Where the tablet becomes legible we are on the shores of the great deep, that is to say, of the Persian Gulf, near the "mouths of the rivers" Tigris and Euphrates, beyond which lay the Island of the Blest. Here the rivers run into the land in the shape of a bird's beak, and no living man has penetrated beyond them and returned to tell the tale. Even Gilgamesh, though of divine origin, only saw Utu-napistim "afar off."

With his arrival on the shores of the ocean, or "deep," the first part of the writer's narrative is finished, and a map of the world is accordingly introduced in order to illustrate the course of the ocean-stream and the position of the seven mythical *nagû* on its farther shores. This circumambient ocean, which encircles the earth "like a snake," and was the origin of the Greek conception of the circumambient Oceanos, and of the mediaeval maps which were based upon it, is called the Nâru Marratum, "the Bitter" or "Salt River," a name properly applied to the Persian Gulf. Owing to its reflux action, the Persian Gulf was regarded as a river which flowed from south to north in two different directions—hence the Merathaim or "Twin Marratu" of Jer 50²¹—and as being the ocean-deep, was the source from which all the rivers of the earth were derived.

The origin of the belief in the circumambient ocean is not difficult to understand. At an early date the Babylonians had become acquainted with the Mediterranean, or "Sea of the Setting Sun," in the west,

as well as with the "Upper Sea," or Lake Van, beyond the mountains of Ararat, in the north, and it is possible that stories of the existence of the Black Sea had made their way to the Assyro-Babylonian colonies near Kaisariyeh in Cappadocia. Lake Urumiya was also known, east of Armenia. As has been shown by M. de Morgan, the Persian Gulf at the time curved inland, far to the north on the eastern side of the Babylonian plain. Hence the Babylonian map-maker would have found what seemed portions of the same "salt" sea surrounding the known world on all its four sides, and in the absence of geographical explorations which would have made it clear that the various "salt" seas were really cut off from one another by intervening land, it was natural to conclude that they all formed parts of one continuous "salt river" which surrounded the whole earth. The *nagê*, or "coastlands," admit of an equally easy explanation. Beyond the Mediterranean the Babylonian traveler had seen Cyprus rising up on the horizon like a cone; and Sargon of Akkad, according to his annals, had even "caused the spoil of Syria to cross [the sea] in the lands of the (western) sea." Beyond the Amanus mountains, from which the priest-kings of Lagas brought beams of cedar for their temples and palaces, rose the Cilician coast, on the other side of the gulf of Antioch; beyond the lakes of Van and Urumiya other shores were visible; and such was also the case beyond the Gulf of Suez, and the north-eastern extension of the Persian Gulf. The words "in sight of," in the map, signify the distance "between" one *nagû* and another.

Only one of these "coastlands" had been visited by the traveler himself, or indeed by mortal man. This was the fifth. Since the enumeration of the *nagê* starts from the Island of the Blest "at the mouth of the rivers," and since this part of the ocean is represented on the map by a figure like a bird's beak, the list of coastlands must begin at the south of the map. Hence the fourth *nagû* will be that to the N.-E., opposite "the mountain" of Nizir; and the fifth will be the Cilician coast, opposite Khappan, an unknown geographical name, which may be an old mode of spelling Khaman or Amanus. Assurbani-pal speaks of conquering Amanus "and its coastland" (*adi nagi-su*). "The place from which there is no exit" would be the head of the Gulf of Antioch. According to the usual computation, 7 *kasbu* would be about 28 miles, which agrees with the average breadth of the gulf. As this was the only part of the "Salt River" the breadth of which was tested by the writer through personal exploration, he assumes that the ocean-stream had the same width everywhere else, and the distance from the hither bank to each *nagû* is accordingly always the same. The third *nagû*, so lofty that no birds can fly over it, will be the mountains of Sahend, on the east side of Lake Urumiya, since it is in the latitude of Ararat and Assyria. The third *nagû*, in the latitude of Dur-ili, would be the mountain range behind Susa. Cyprus corresponds with the sixth *nagû*, with its great bulls, whose horned heads are such a favorite device on early Cypriote seal-cylinders; the seventh *nagû* will be the Egyptian coast, or, less probably, the Sinaitic Peninsula. It is interesting to find the land where there is no old age already located in the fourth *nagû* in the far north; we have here the starting-point of the story of the "ageless" Hyperboreans.

To turn now to the map. The geography of Southern Babylonia agrees with that of the map of early Babylonia compiled by M. de Morgan from soundings at the head of the Persian Gulf and a critical examination of the growth of the silt. The Tigris and Euphrates fall into a channel which is called the Marsh (*apparu*) at its eastern end, and the "cleft" (*bitqu*) at its western end. It was on the edge of this cleft that Eridu stood, as well as the Aramaean settlement of Bit-Yahkin, i. e., , corrupted into Bit-Yakin in later days. South of this came a long, low tract of land, intersected by channels communicating between the inner channel and the gulf, and called (like the adjoining Arabian coast) Nituk and Dilmun by the Babylonians. The "city" marked upon it was doubtless Dilmun. The "bird's beak" was an inlet of the sea, along which the southern course of the Tigris now runs, and opening out into the Island of the Blest, to which Utu-napistim had been translated. East of it was the frontier fortress of Dur-ili; north of this is an unnamed city, which may be Opis, but is perhaps intended for Susa, though, if so, Susa has been moved a long way out of its proper position. Northward again is Assur, that is to say, the city of Assur, where, however, the copyist has erroneously inserted the ideograph of "country" inside the circle which denotes a city. Above this is Ura-Urdhu, i. e., Urardhu or Ararat. The name is so written as to give the author's idea of the etymology of Urardhu. The ideographs BURBUR[*ki*] signified "the Upper Country;" and we are told, therefore, that when they denoted northern Babylonia, or Akkad, they were pronounced Uri or Ura; when they denoted Armenia they were pronounced Urdhu (rendered Tilla in Semitic Babylonia); and when the land of the Amorites (Palestine) was meant, the Heb. . The Sumerian *ura*, *uri* (also *wur*, written *bur*), was a dialectal form of *ar*, *arra*, *arri*, "highlands," of which the Semitic equivalent is given as *nādu*, Nod; and from *ar* the Amorite-Hebrew  was borrowed, with initial . Urdhu is found in the Vannic inscription as a native name of the Armenian plateau, and the author of the map has accordingly resolved the two-fold BUR-BUR into Ura-urdhu and so obtained his etymology of Ararat. Two more unnamed cities are marked north and south of Khabban in the Amanus region; and, finally, another "city" is recorded in the land of the Amorites, the name of which is unfortunately not stated. Its position would agree with that of Uru-Šalim, or Jerusalem, "the city of Šalim."

It will be observed that both the Tigris and Euphrates are not only made to flow from the foot of the mountain of Nizir, but are also derived from the ocean-stream, that is to say, from the lake of Van. Hence the two rivers were regarded as like the *amphisboena*, "with two heads," and the "Salt River" could be described as "parted into heads." The "cleft" corresponds with the Pison of Genesis; there is nothing, however, to answer to the Gihon, unless it be the "Bird's Beak."

THE DISTRIBUTION OF PRECIOUS METALS.

BY STEPHEN D. PEET, PH. D.

It is a common impression that the people of America at the time of the Discovery were in the Stone Age, and were destitute of the art of working in metals, and knew nothing of the higher grades of progress. Nothing, however, could be further from the truth, for it is plain that a large proportion of the people had passed out from the Stone Age and were already acquainted with the use of such metals as copper, bronze, silver and gold. They had passed beyond the stage of savagery into barbarism; some of them had reached the early stages of civilization.

It is true that if we classify them according to geographical divisions, we find one class situated north of the chain of the Great Lakes to be a race of savages, who made use of stone for their weapons and tools; but those who were in Mexico and Peru were accustomed to the use of copper tools, and were in possession of silver and gold, and for this reason should be ascribed to the Metal Age.

I. This is plain from the descriptions given by the early voyagers, and especially those who under De Soto traversed the region north of the Gulf of Mexico, and nearly reached the homes of the Cliff-Dwellers and Pueblos, for everywhere they went they found the people dwelling together in villages, consisting of houses clustered together; the ruling classes having their houses upon the summit of the pyramid mounds; all of them gained their subsistence from the raising of maize, vast fields of which surrounded their villages. Still further, the people who dwelt in the region which was conquered by Cortez and his companions were dwelling in great cities, some of which were surrounded by walls and guarded by gateways. The chief city in which Montezuma dwelt, was in the midst of the lake, and was reached by long causeways which had been built, and guarded by gateways. In the midst of the city was a magnificent palace, in which Montezuma and his retainers dwelt, all of them arrayed in rich clothing. In the midst of the city was also a temple, in which the priests officiated and offered human sacrifices upon altars whose smoke arose to the sky above the city.

Certainly no one who has read the description of this city and the abundance of gold and silver, could say that the people there, were in the Stone Age, or could be classed among savages, notwithstanding the cruelty of their sacrifices. The same may be said of the Peruvians who were conquered by Pizarro and his companions, for they also dwelt in cities which

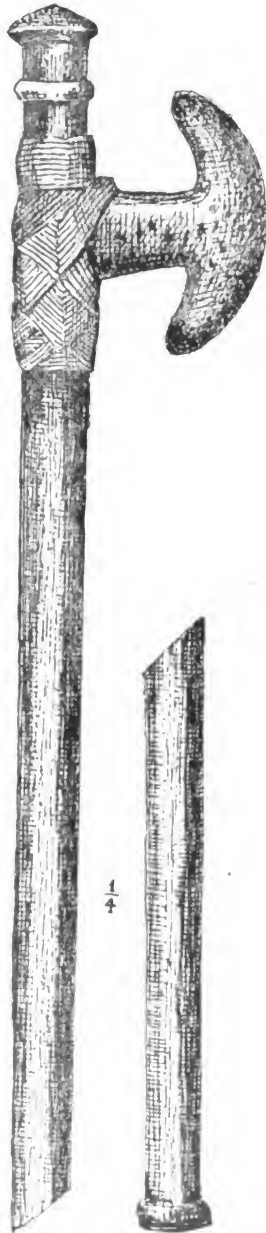


Fig. 1—MONTEZUMA AXE.
Made of Syenite and Feldspar.

were surrounded by walls and filled with temples and palaces. These cities were reached by long roadways which crossed the streams on suspension bridges, and were traversed by bands of traders, who led such domestic animals as the llamas which furnished the wool from which alapaca garments were woven.

The description of these cities and the golden treasures in them must convince any one that it was the Metal rather than the Stone Age which prevailed here.

There were, to be sure, regions in South America which were covered by vast forests, which to this day are seldom traversed. There were also vast plains or pampas inhabited by people who dwelt in huts and were nearer savagery than civilization. In other parts of North America there were regions where the fishermen who dwelt near the forests, built their villages upon the seacoast, and gained their subsistence from the fish which abounded in the sea; but even these had passed out of the Stone Age, for they had copper, which they regarded as a precious metal, though they built houses and canoes by the use of stone axes and adzes. The picture is a varied one, but is interesting, because of the progress which the people had made during the prehistoric age, and without being in contact with other continents.

This geographical division of the continent is worthy of notice, for it resembles that which has prevailed everywhere. Savagery, barbarism and civilization were dominant at the opening of history in the far East, but they also appeared on this continent when the book of history was opened by Columbus. Savagery prevailed in the far North, barbarism in the middle districts, and a form of civilization in

the regions embraced by Mexico, Central America and Peru.

The different stages of progress were indicated by the metals in use, as well as by the customs of the people.

II. It is, however, as appropriate to make what might be called sub-divisions in the Metal Age as in the Stone Age. In the Stone Age we have the paleolithic, eolithic and neolithic; so in the Metal Age we have the copper, the bronze, the silver and gold, each metal being an index to a different stage of culture,—copper being the index to one, bronze to another, and silver and gold to still another. The Greeks used the terms "golden age," "silver age," and the "age of brass," to

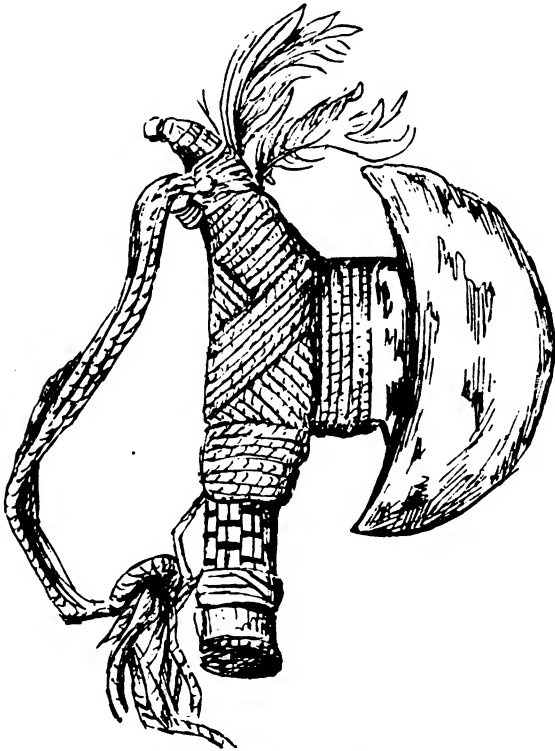


Fig. 2—STONE AXE FROM BRAZIL.

indicate the decline of society, but ethnologists at the present time, reverse the order: placing the Stone Age first, the Bronze Age next, and the Gold Age last. This division is especially appropriate and useful upon the continent of America, for here the geographical districts are marked by the preponderance of different kinds of relics, stone relics being found more numerous in the North, copper in the middle parts, and gold and silver in the far South.

The different stages of society were also plainly indicated,

for savagery prevailed in the far North, barbarism in the middle district, and a form of civilization in the regions of the Southwest. This division becomes apparent when we enter into the museums where relics are gathered, for we find that while there is a great variety of material which represents the savagery which prevailed in the northern parts of the continent, there is very little metal represented; from other parts where barbarism formerly existed a great variety of relics have been gathered, but no precious metals are to be seen, though textile fabrics, pottery and carved specimens are very numerous, the only metal being copper; but when we come to the department where the relics of the Southwest provinces are gathered, we find very elaborate costumes, showing that the art of weaving had reached a high stage, and beautiful featherwork, pottery of an advanced grade, and an abundance of such



Fig. 3—STONE AXE FROM THE LAKE DWELLINGS.

precious metals as silver and gold, and royal apparel which showed much skill in the art of weaving, as well as the abundance of jewels and precious stones, all furnishing evidence that art had reached a high stage.

The descriptions given by the Spanish historians of the cities of Mexico and Central America certainly indicate that in these central provinces society had reached a high stage of progress. In fact, America presented about the same contrast as the eastern provinces of Asia did at the opening of history, for the voyagers who passed around the Cape of Good Hope and across the Indian ocean and up the eastern coasts came upon as many different stages of society, and as great contrasts in the mode of life, as those who sailed down the west coast of this continent, and to their astonishment found such

an abundance of gold and silver in Peru. The land of Cathay had been reached by Marco Polo before the time of Columbus, and the stories of the magnificent cities which he had seen surprised the world, but it was on the eastern side of the same wide sea that the marvelous cities dawned before the visions of the Spaniards, though the gold and silver which abounded here produced more astonishment than did the wealth and luxury of the Indias.

III. There are not many specimens of the precious metals to be found at the present time, on account of the rapacity of

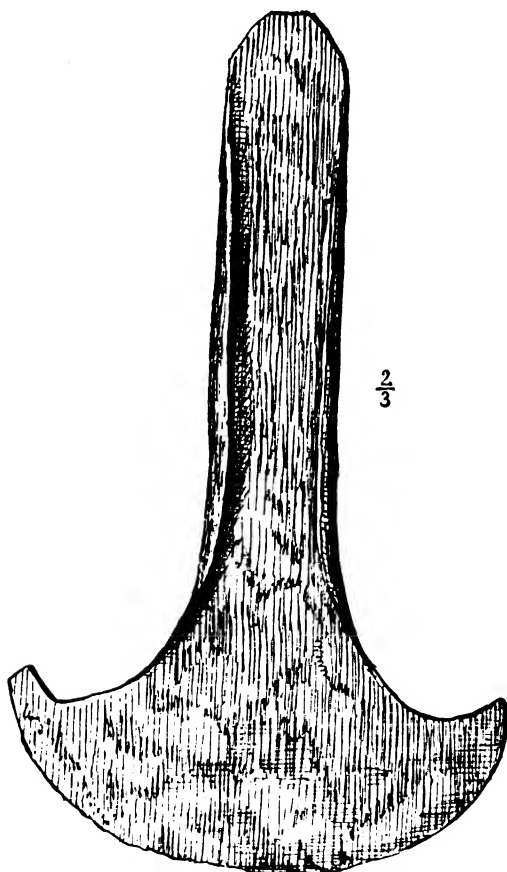


Fig. 4—BRONZE AXE FROM IRELAND.

the Spaniards who invaded Mexico and Peru, and conquered the natives who had dwelt so long in these different provinces. Gold and silver were found in great abundance at that time in both regions, but they were either carried away by the conquerers, or melted up and made into coins by their descendants.

A great abundance of copper has been discovered since that time, and many copper relics are to be seen in the various museums; but the specimens of bronze are very scarce. The different forms which the copper relics presented are interesting from the very fact that many of these have the same shape as the stone relics, and served about the same purpose. There were axes, knives, arrow-heads, spear-heads, gouges, sickles, spools, spades, awls, perforators, fish hooks, and even needles, many specimens of which are now gathered into the more prominent museums, such as the National Museum at Washington, the Natural History Museum at New York, the Peabody Museum at Andover, the Historical Society of Cleveland, the Philosophical Society at Philadelphia, the Davenport Academy of Science, the Museum of Natural History at Milwaukee, the Historical Society at Madison, the Historical Society of Minnesota at St. Paul, and the Cabinet of Beloit College.

From these we learn about the skill of the prehistoric inhabitants of Mississippi valley, for there are weapons which could be used in warfare; tools that would be serviceable in working the soil; other tools which would be useful in constructing canoes, and even rude houses. In examining these copper relics we are brought into contact with evidence which shows that there was a progress beyond that which generally appears in the Stone Age, for there are among them needles, awls and perforators, which were used for making garments and piercing beads and pearls; all of them showing skilled workmanship. Besides these, many of the ornaments which were worn were made out of copper: among them breast plates, helmets, shields, and many other articles.

What is more, there were certain figures made out of copper which represented the supernatural beings which were worshipped. These were represented as having a human form and wearing the usual costume of the natives, with moccasins on their feet, sashes around their waists resembling the maxtli of the Mexicans, bracelets upon their arms and legs, anklets and wristlets; and even having wings protruding from their shoulders, thus reminding us of figures of angels which were common in the far East during the Bronze Age, and even in the Iron Age. We may say, then, that nearly all the copper relics which have been found in the Mississippi valley indicate a stage of progress which was far in advance of that of the Stone Age, and yet was not equal to either that of the Bronze or Iron Age. In fact the copper relics all furnish a connecting link between the Stone and the Bronze Age, and prepare the way for us to examine the bronze relics which were common in the Southwest provinces.

Bronze is an alloy of copper and tin. Copper is very common, and is found in many parts of the world, but tin is very rare. Accomplished miners like the Phoenicians and Etrus-

cans discovered it in many places, the tin mines of Great Britain being among many others.

We know from the Tel-el-Armana Tablets that bronze was imported into Northern Syria in the eighteenth dynasty. It was found in Caucasus in ancient days, and later in Cornwall, England. All these places became centres of the bronze industry. Bronze was common among the Lake Dwellings of Switzerland, but it is supposed that it was introduced from the regions around the Mediterranean Sea. There were two classes of Lake Dwellers: one belonged to the Stone Age; the other to the Bronze Age; the stone being prehistoric and the bronze protohistoric.

Egypt furnished a vaguely defined margin between the southeast and northwest. The morning star of civilization appeared to the people of the Euphrates and the Nile about the same time. The oldest Egyptian traditions point to the sacred land of "Punt," as the place where the earliest civilization appeared. The south of Arabia and the opposite Somali coast would both come under the designation of "Punt." There was, however, another country besides Egypt, where

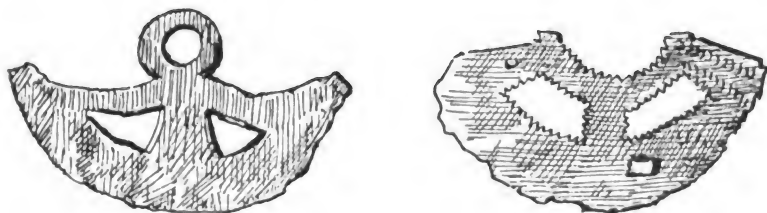


Fig. 5—BRONZE RAZOR FROM BURGUNDY. Fig. 6—GALLIC BRONZE RAZOR.

the introduction of bronze generated an independent civilization. Civilization was not born in Egypt earlier than in Chaldea. The parent of both was the ancient bronze using people who dwelt somewhere in the south of Asia, and who came into Egypt by the way of the Red Sea.

It is important to notice that the situation of Chaldea was one favorable to a mixed race. We would naturally expect Elam to have been the name of a tolerably advanced neolithic people, dating back to 3000 B. C. The Elamite civilization was diverse in its origin from the Chaldean. The Chaldeans were a seafaring people, but the Elamites were agriculturists.

The evidence of the extreme antiquity of iron has been given in Egypt, for Africa as a continent never had a Bronze Age. In some cases in Babylonia the evidence is in favor of the priority of copper, and we may presume that copper preceded bronze in many parts of the world, where it was a substitute for stone.

When we come to the Bronze Age, we find a great modification in the forms of the tools, weapons and utensils. Copper can only be successfully cast in flat molds with end open to the

air. In many parts of Europe, such as North Italy, Hungary, and, perhaps, in Ireland, a primitive copper culture prevailed. We may conclude that copper preceded bronze. No bronze has been found in use among the tribes on the Northwest coast, nor even on the Eastern side. Copper was in common use among some of the tribes, but was regarded more as a precious metal, than a metal to be used either for domestic or mechanical purposes.

India has copper implements of a very primitive type, but is poor in tin. Her so-called bronze is in reality brass. In Southern China copper and tin are found together. Tin and copper were worked in Scandinavia as early as 2000 B. C. Sir John Lubbock has pointed out the records of the Phoenicians on the Mediterranean, which furnishes a clew to the earliest date of metal working. Strabo says that the Phoenicians car-

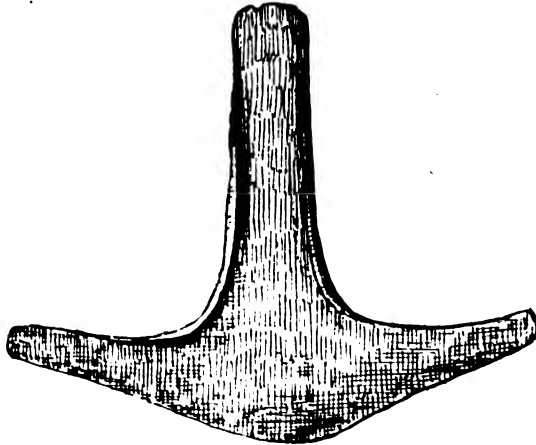


Fig. 7—COPPER AXE FROM EGYPT.

ried on the trade of tin at Cadiz, and Sir John Evans maintains that between 1200 and 1500 B. C. the Phoenicians were already acquainted with mineral fields in Brittany, bronze having been known in Egypt long before that time. Copper in Brittany would probably date back to an earlier epoch. Lucretius gives a picture of primitive life, but makes the definite statement that *ferrum* (iron) was discovered later than *aes* (copper). Aeschylus alludes to iron as the "stranger from across the sea," the "newcomer from the Scythians."

On the eastern shores of the Black Sea was one of the sources from which the Greeks obtained their iron. Here, not in the steppes of Scythia, lived the Chalybes, one of the iron working people of the Old World. This name was borrowed to the Northern language of Europe in the word "chate." Aeschylus points to a time when iron was still

regarded as an intruder. The old metal had a sanctity about it, for in olden times it was associated with gods and heroes. In ancient Rome, the priest of Jupiter might shave his beard with only a bronze knife, and it was an ancient usage that a new town might only be ploughed around with a plow share made of bronze. The same feeling is expressed in Deuteronomy and Joshua, for altars of earth were allowed, but hewn altars, worked with iron tools were forbidden.

Sir John Evans has divided the Bronze Age into three periods: 1, The period of primitive forms, 2000 B. C.; 2, The

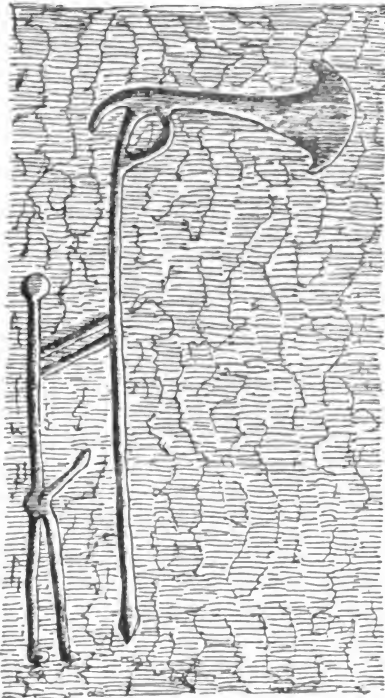


Fig. 8. ROCK-SCULPTURES IN SWEDEN.

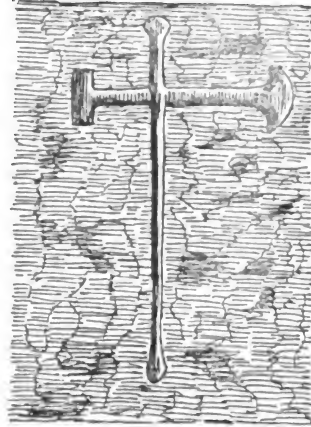


Fig. 9.

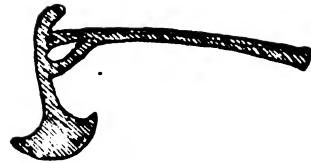


Fig. 10.

period of the flanged celts, also the spear-head with tangs: 3, The period of the bronze, when swords, socketed celts and spears are conspicuous.

A bronze disk covered with gold foil was found in Denmark, mounted upon a miniature carriage drawn by a horse; this was a ceremonial carriage. The discovery of such a disk, shows that the cult prevailed in Ireland as early as 1000 B. C.

As to the time of the introduction of bronze into America, we are ignorant. Still, from New Zealand to the Sandwich Islands, from the Indian Archipelago to the Easter Islands, and from Europe to Greenland, there may have been a migra-

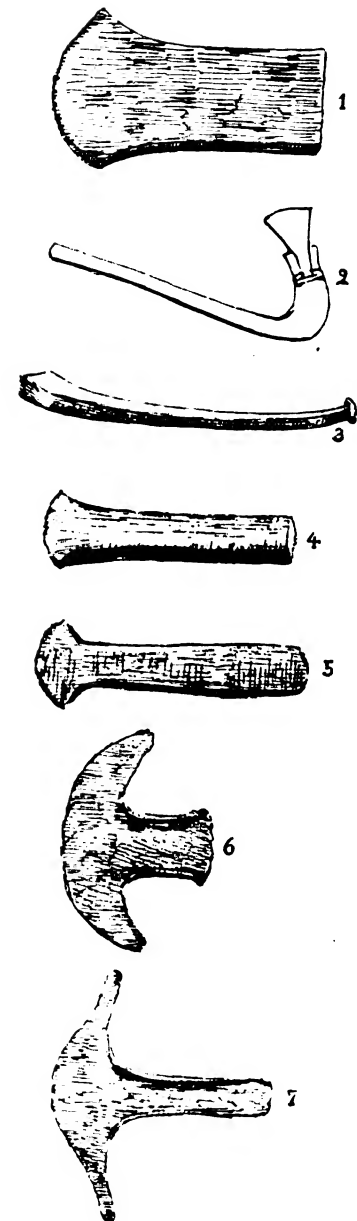


Fig. 11.

tion. America was peopled by immigrants from the Old World, but the date and the route is unknown. Two savants to whom we owe many discoveries, Ameghino and Whitney, have traced the existence of man in America to the tertiary age, but the migrations have been separated only by centuries. Some of the stone hatchets from Ecuador, in South America, were provided with projecting ears, and were fastened to helms; similar to those found in Europe. A bronze axe at the end of a crooked club has been found in the salt mines of Austria, now in the museum at Salsbury. Handles intended for pal-staves have been found in the Italian Lake Dwellings. That the flanged and winged celts were destined to be mounted in the manner of hatchets or helms, instead of spear-heads, is evident. Crooked shafts are found in the south of France. The earliest known bronze helmets belonged to a time when iron was already in use. This is true of those found in Assyria, Etruria and Modern Africa.*

IV. It is to be noticed that bronze relics in America have an entirely different shape from the copper relics. The copper relics, as we have seen, resemble those made of stone, but the bronze relics differ from both the stone and the copper. There are, to be sure, a few relics, such as chisels or axes, which have the same shape in bronze as in copper and stone. This is illustrated in the cut (Fig. 11). No. 1 represents the shape of the

See Valentini's "Essay on Semi-Lunar Crescent-Shaped Tools." American Antiquarian Society, Worcester, Mass.; 1885.

Mexican axe blade, the same as is found in Central America and all parts of the globe. Despite the abundance of axes at the time of the Conquest, at present they seem to be very scarce. A specimen was taken from a tumulus in San Luis de Potosi. No. 2 is copied from Kingsbury's collection. While the solid wood axe had a straight handle, this is carved like those found in Germany. It was the instrument used by the carpenters to prepare the wood for building; in other words, it was used for hewing, like a broad axe. No. 3 was used to do fine work in wood, such as carving. No. 4 is identical with our modern chisels used by stone cutters, in shape and dimensions. It also resembles the common stone

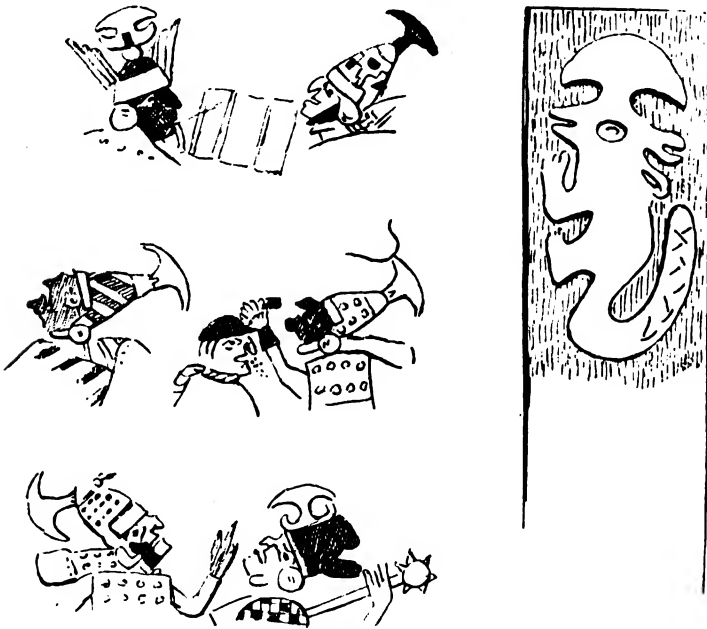


Fig. 12—PAINTING ON EARTHEN VESSEL.

axe or chisel. It measures seven inches in length, and one inch in diameter. It is from the city of Antiquera, Peru. No. 5 represents a form which is common. It has a flanged blade. The purpose of the tool is unknown, it may have served as a sculptor's chisel. The form of its edge, together with its solidity made it a tool suitable for sculpturing stone. This solves the problem, as to the tool which was used in sculpturing the massive columns which were found in Central America by Mr. J. L. Stephens. No. 6, resembles the copper *taus* which were used for money by the natives before the Conquest. Bastian inclines to the opinion that it was the crest to a Mexican helmet. Prof. Putnam says they may perhaps have

been used in the manufacture of pottery. Valentini differs from others in reference to this instrument. He says: "I can not understand the reason why an instrument of such peculiar shape as these instruments are, could have been manufactured for the making of pottery, for this is exclusively the woman's lot."

A painting on an earthen vessel which was dug up in 1874 at Truxillo, shows twenty warriors in full battle dress. They are arranged in ten groups; each group consisting of one man who is the victor and the other the victim. Six wear helmets and six have the top of their helmets crowned with an object of semi-lunar shape. The helmet crests were made of bronze or copper, and they give the true meaning of the tau-formed copper blades.

Other bronze tools are described by Mr. Valentini (Fig. 13). They are found along the entire Peruvian coast; they vary in dimensions from an inch to several feet, and are unvarying in their shape.

Knives with circular blades are common in Peru. They are interesting from their resemblance to those used by the modern glover and saddler, and by the ancient Egyptian harnessmaker. Various specimens of these were collected by Mr. E. G. Squiers, and are described in his work on "Ancient Travels in Peru." One of these resembles in shape those which are now in use in our kitchens, namely, the chopping knives. The most remarkable fact in connection with these semi-lunar crescent-shaped implements is that they resemble the ancient Egyptian battle axes. One of these represented, with the blade riveted to the handle, is about 4,260 years old and may be regarded as the "patriarch" of semi-lunar shaped implements. It is remarkable that blades or knives similar to these have been found as far away as India. Here we find the God Siva represented in the sacred caves of the Brahmins. In one of these sculptures the god holds in his hand a battle axe identical with the Egyptian blade of Beni Hassen.

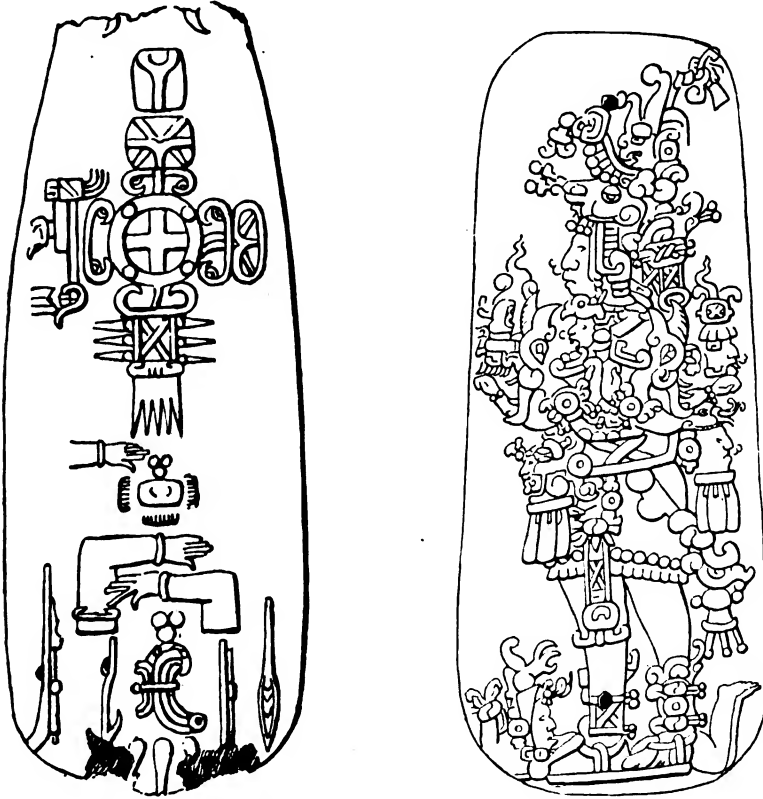


Fig. 13.

We may say of all these semi-lunar knives and axes that they represent the Bronze Age in Europe, but the same kind of tools were used in Central America and Peru as were used in Europe in prehistoric times. A semi-lunar flanged bronze implement was disinterred in Ireland, and it had the shape of the Mexican copper tau.

IV. This finishes the general review of the bronze relics which were discovered by the Spanish conquerors in Mexico. A few specimens were secured by the Spaniards which were neither bronze, silver or gold, but were even more valuable than either these metals. We refer now to the green stones called

chalchihuites. These stones are in the form of celts, but they were precious stones and were valued very highly. Figures of men, symbols belonging to the Maya calendar and other objects were carved upon their surface. One of these chalchihuites was known as "the Humboldt celt. Montezuma presented his jailors with small chalchihuites, Cortez received two large ones, which were said by Montezuma to be "worth two loads of gold." These green stones brought from



Figs. 14 and 15—CHALCHIHUITES.

Mexico resemble those found in Asia. They also resemble the nephrites which were dug from the bottom of the Helvetian Lakes in Switzerland. There are about 189 specimens of the nephrites, 79 being jadeites; ten specimens are the products of the exhumation of American soil.

The Humboldt celt was engraved with figures which represent the javelin, the throwing stick common among the Malays, Polynesians, Patagonians and Aleutians. Also a lasso, an oar and a cudgel. Above these were two human arms folded, and

above these, a hand with outstretched fingers, and three incense balls. The most conspicuous object is the maxtli, or ornamental scarf, which with the noblemen reached as far as the short tunic; with women and priestesses, as far as the ankle. With this scarf was a girdle, fastened with a succession of golden clasps. The scarf shows on its front a cross drawn within a circle. From these we learn about the varied ornaments which were worn by the priests and rulers of Mexico. The clasps and buckles were made of gold, and the sashes of the most highly wrought specimens of embroidery. The fringes also show the elegance of the regalia with which the priests and kings were adorned.*

The Palenque tablet represents the same or similar ornaments, though in this the jewels and the scarfs and precious stones seem to be placed on the scarfs, which hang from the arms of the cross, and from the body of the bird above the cross. The symbols of religion were mingled with the signs of royalty, and reveal the wealth which was put into the hands of the priests and kings by the half-civilized people who dwelt in Mexico at the time of the Discovery.

Gold and silver vessels abounded in the palace of Montezuma, and were especially numerous in Peru. The artists in the latter country were very expert in the working of metals and making of vases of silver and gold.

Prof. Putnam says the customs and beliefs of the Incas point to a northern origin, and have many resemblances to those of the ancient Mexicans.

V. As to the origin and geographical distribution of these relics, the following facts have been gained: Khotan in Turkestan appears to be their starting point, they pass across the Aral and Caspian Seas, through Asia Minor, to Ancient Troy, to Crete, and finally reached Greece and Italy, and were distributed among the Helvetian Lakes. This was in the Old World. In the New World it would be impossible to trace them with any such distinctness. We may say that the shape of the celt and the symbol of the cross and circle were similar in the Old and New Worlds, though whether they were transmitted or originated separately is uncertain.

In the Tiffany collection of gems belonging to the Museum of Natural History in New York is a very ancient Babylonian axe head of pure gold. This originally was a votive offering in the temple.

The best illustration of the use of the precious metals, is the one which is represented by the cuts (Figs. 16, 17 and 18). The first of these represents the bronze bells, found in Chiriqui, Central America; they were taken from the graves. The second represents a bird with a human face and a grotesque

* See description given by Dr. J. J. Valentini in the *Proc. Am. Ant. Soc.*, 1881.

human figure, both of them were pure copper plated with yellow gold. The third represents two pumas, made with hollow

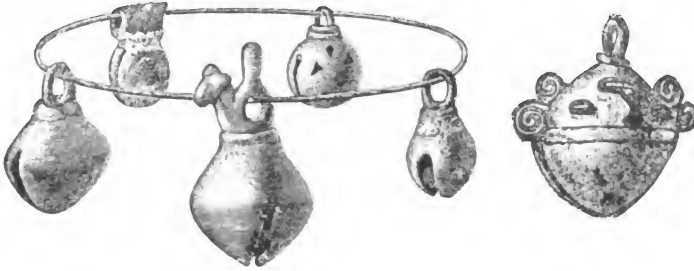


Fig. 16.



Fig. 17.

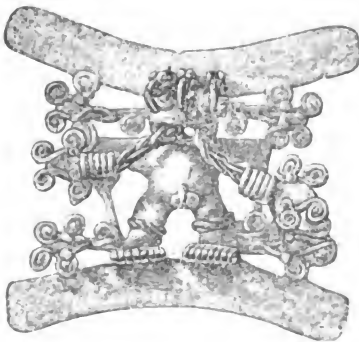


Fig. 18.

bodies, and holes through the feet for suspension; made of pure copper. A grotesque human figure, made of nearly pure

gold is also illustrated in this cut. The feet are flattened out, the hands are grasping cords of wire, which seem to be intended for serpents, the heads of which project. Many specimens of figurines in pure gold have been found in Peru. Some of which are very ornamental and well wrought.

In Palmyra and India there are offerings to the divinities of precious stones like the chalchihuites. This would show a parallel between the two widely separated countries, and suggests that there may have been a transmission from one continent to another. The chalchihuites combined in themselves the form of the ancient celt and the hieroglyphics of an advanced and somewhat cultivated people. They are not precious metals, but were more highly prized, and were at the same time made sacred by being offered to the gods with the expectation that prayers would be heard and answered.

The Leyden plate which was disinterred in Guatemala is also worthy of notice. This contains a pictograph representing a warrior standing upon a captive. He is decorated with a complicated mass of jewels and drapery; human faces and dragons' mouths are seen amid the drapery. He wears a skirt with fringes, and has the maxtli hanging below the knees. The inscription upon the back of the plate contained symbols and hieroglyphics similar to those found in the calendar system, which was common among the Maya tribes. The carvings commemorate the victorious deeds of some chieftian, who on the days described had gone to the temple and offered sacrifices to his god. (See Fig. 15.)

We learn then from these precious stones, as well as from the precious metals, many things which suggest a migration from the Old World to the New World in prehistoric times. The date of this migration is unknown, and the route taken is very uncertain, but there was a tradition among the Peruvians at the time of the conquest that the ancestors of the Incas had come from across the sea, and had conquered the natives who dwelt there, and made them subject to their power. It was owing to this conquest, and to the fact that the natives were obliged to labor in the mines and were subject to the ruling classes, that such wealth and magnificence abounded in Peru.

ORIENTAL DEPARTMENT.

EDITED BY DR. CHAS. H. S. DAVIS.

THE GREEK POMPEII.

The French School at Athens, which for the last four years has been concentrating its efforts in making excavations on a vast scale in Delos, the smallest of the Cyclades, but the island which is of the greatest archæological interest, for it was the site of the great temple sacred to Apollo which each year attracted throngs of pilgrims from the east of Greece, and originally contained the treasury of the Greek states. France just now is breaking the record in Hellenic discoveries, and great is the delight among savants and academicians. The great "find" announced by Professor Maurice Holleaux, director of the School of Athens, to which we called attention in the Sept.-Oct. *Antiquarian* consisting of six archaic lions, marble statues of remarkable beauty, gold and jewels, fragments of sculpture dating from the fourth century before Christ—the period when the Greek sculpture under the lead of Scopas, Praxiteles, and Lysippus had attained its zenith—inscriptions, coins and pottery, made a great stir among French archæologists.

This is now followed by another "find" of exceptional interest, and recently communicated to the Academy of Inscriptions and Belles Letters, by the Duke of Loubat. Among these freshly excavated works of art is a large marble bas-relief, representing four full-length, life-sized figures walking in procession. This bas-relief is said by those who have seen it, to equal in artistic merit anything of the kind found in Greece. There is a fine marble Egyptian statue of a woman leaning against a pylon covered with hieroglyphics, which is altogether different from any thing found in Greece. There are magnificent heads in marble. One of these representing a Heraclidæ, is an absolute masterpiece. This head is considered by the artists of the French School of Athens to be the finest specimens known of Greek sculpture. There is another fawn-like head, with a beard, and bearing hyacinthine curls, and also a fine head, that evidently belongs to an unidentified statue of a deity, or a muse, excavated last year. Additional treasures of coins, pottery, mosaics and jewels are also announced by Professor Holleaux.

The famous Venus, in the Louvre, was dug up in the neighboring island of Melos, and the Loubat marbles, now being collected at Delos, and which each year are receiving such valuable additions, offer the most remarkable examples of sculpture of the Scopas period.

It should be noted that the Greek government does not allow any antiquities to leave Greece. It is upon this condition that permission to make excavations is granted, and a single instance of infringing this law would *ipse facto* annul the concession, although foreign excavators before beginning operations are obliged to purchase outright from Greek subjects the land where they intend to dig. Moreover, the Greek government does not contribute a drachma towards the excavations in Delos, which are carried on in a moist, feverish soil, where two-thirds of the laborers are frequently down with malaria. The cost is mainly defrayed by the liberality of the Duke of Loubat, to which is added a small annual subsidy from the French government.

The Greek law prohibiting the exportation of antiquities is, after all, a necessity, for almost all of the finest, and certainly the greatest number of the works of art of ancient Greece, have been destroyed by the Turks, or are to be found in the museums of Europe.

The Elgin marbles, comprising the best part of the friezes of the Parthenon, are among the most important works that left Greece, but Lord Elgin did Greece a good turn by taking them away, otherwise they probably would have been destroyed by the Turkish soldiers. The French government recently sought to obtain a concession of the Greek antiquities found by the School of Athens, at Delphi and at Delos, with the object of placing them in the Louvre, but finding that this could not be accomplished, the French University of Public Instruction and Fine Arts has decided to found a museum of its own in Delos, where, owing to French enterprise and American money, the ancient town and seaport have already been excavated, thereby bringing to light streets, dwelling houses, market places, monuments, theatres, stationary, mosaics, columns, jewels, inscriptions, pottery, tablets and cooking utensils, which give with unprecedented accuracy complete insight into the every-day life of this antique and sacred city.

Recent excavation work at Tell es-Safia, one of the cities in the Shefehan, has been made the subject of a study by Wm. P. F. Dorph, the honorary secretary for the N. S. W. Palestine Exploration fund, which forms part of the last number of the transactions of the Royal Geological Society of Australia. The author endeavors to prove the existence at this site of a pre-Israelite city, which was probably fortified during the Jewish period, and he is strongly inclined to think that the recent investigations on the spot confirm the identification of Tell es-Safi with the Biblical Gath.

Hamdy Bey, director of the Imperial Museum of Antiquities, who recently celebrated the twenty-fifth anniversary of his activity as chief of that famous scientific institution, has been honored on this occasion by nearly every archæological association, and by many leading universities of Europe. Several universities bestowed on him the rank of doctor *honoris causa*. The museum is essentially his creation, and its undisputed scientific importance is entirely due to him. He prepared and directed the two archæological expeditions which led to the discovery of twenty-one sarcophagi, most of which are masterpieces of Hellenic sculpture, and of the matchless collection of ancient monuments unearthed in Phœnicia, mostly at Saida, the Sidon of the ancients. It is Hamdy Bey who has given a fresh impulse to archæological research in Turkey, which has been dormant for many years. The Turkish soil is still a perfect mine of historical and art treasures, and if the work of disinterring these treasures of antiquity is carried on in the systematic way, initiated by Hamdy Bey, the museum at Stambul will undoubtedly excel in scientific value the best museums of Europe.

Two quite extensive fragments of Greek comedies have been found by the French investigators, Pierre Jouguet, and published in the *Bulletin* (Vol. XXX.) of the French classical school in Athens. These fragments were originally discovered in papyrus coffins, which were unearthed in Gurob, in the Fayum, and the writing shows that they belong to a very early age, the one to the third and the other to the second pre-Christian century. The former is divided into seven parts, and treats the rediscovery of a lost daughter by her parents. Of the second fragment two prologues have been preserved, both in iambic metre. The first tells the story of how a young man purchased a young girl for a wife; and the second is a specimen of metrical art, the author having woven into the composition the entire alphabet in anagram form. Both specimens belong to the New Comedy Period.

In a communication made to the Académie des Inscriptions et Belles-Lettres, M. Maspero narrates the results of the latest excavations in Egypt. Among them is a fund of such interest to Greek scholars that it is not safe to estimate its value at present. S. Kem Schgaron, a locality to which M. Maspero's attention had been attracted several years ago, fifty-five manuscript rolls have been discovered, one of which is more than four yards long. Among them one contains some 1,200 unpublished lines of a comedy by Meander. These will be published shortly, and may help to make known, in his own work, a classical author hitherto read chiefly by Latin imitations.

"Babylonia" is the title of a new periodical devoted to Assyriology and published under the direction of Dr. C. Virolleaud, of the University of Lyon. The first number deals with certain omen-tablets in the British Museum, the texts of which have been published by Dr. Boissier in his *Choir de Textes*, and further contains a number of prognostics brought into connection with various diseases. A vocabulary is added to the transcribed text in order to guide the student through the uncommon difficulties afforded by their ideographic spellings.

In the Stambul Museum one meets serious students who have come from many parts of Europe to see the Sidon sarcophagi just as the Parthenon marbles draw people to the British Museum, or as the Venus of Milo collects hundreds of worshippers around her at the Louvre of Paris. Great mischief was done up to very recent times by unscrupulous European agents who acquired and sold the most beautiful specimens of ancient art. Hamdy Bey has tried to prevent this practice by inducing the Sultan on various occasions (the last time in the spring of this year) to issue an order forbidding this traffic. But these orders have not proved efficacious, and that sort of traffic is going on almost as briskly as before.

To Hebrew students who, although not having made themselves acquainted with the cuneiform script, would wish to control the Baylonian and Assyrian inscriptions bearing on the Old Testament, we would recommend an excellent little Assyrian grammar and reading book, by Dr. A. Ungnad. The texts transcribed therein into Roman characters are chiefly taken from Delitzsch's "Lesestücke," and full references to the preceding grammar, as well as a good glossary, will serve to introduce the beginner into the mysteries of cuneiform decipherment. As a supplement to L. W. King's serviceable works on Assyrian grammar this new text-book will be welcomed by German readers.

The Archaeological Report, 1904-1905, comprising the work of the Egypt Exploration Fund and the Progress of Egyptology during the year 1904-1905, edited by F. Ll. Griffith, is issued by the Egypt Exploration Fund, 27 Great Russell Street, London. The contents are: Excavations at Deir, El-Bahari E. Naville and H. R. Hall. The Sinai Expedition, W. M. Flinders Petrie—Archæological Survey, M. de Garis Davis—Græco-Roman Branch, Excavations at Oxyrhynchus, B. P. Grenfall and A. S. Hunt—Progress of Egyptology; Archæology, Hieroglyphic Studies, etc., F. L. Griffith—Græco-Roman Egypt, F. G. Kenyon—Christian Egypt, W. L. Crum.

Classical and Oriental scholars will be much interested in Prof. W. M. Ramsay's monograph on Neo-Phrygian inscriptions. Attention was first drawn to this class of inscription by Mordtmann. He believed them to be Armenian. Moritz Schmidt, in 1869, was the first to see that they were in a language akin to Greek, and to recognize in some of them a formula of execration in the Phrygian language. Eighteen years later, Professor Ramsay collected twenty-nine Phrygian inscriptions. He inferred what subsequent discoveries prove correct, i. e., that the inscriptions were not survivals from ancient and sacred formulas, but that they sprang from a living language spoken by a non-Christian population, not in the great cities, where Greek-speaking Christianity had penetrated, but in rural districts, e. g., that to the east of Apollonia and round Antiocheia Psidia, which other remains show to have been among the most educated in Phrygia. New groups of inscriptions have come down to us so worn, or with so uncertain text as these late Phrygian epitaphs. It was not until last year that Professor Ramsay hit upon these perfect and practically certain examples, along with two of the usual mutilated kind, in a village near the center of the Axylon. These five are discussed at length in the present monograph. Their date cannot be accurately determined. Probably they fall between 120 and 240 A. D. Professor Sayce, who examined copies of them, contributes many notes and suggestions. Besides this group, he interprets other inscriptions, copied in the last twenty years, by Messrs. Anderson, Hogarth, Radet and Ouvré, Legrand and Chamonard. This paper appeared in the *Jahrshefte des Oesterreichischen Archæologischen Institutes*. Band VIII., 1905, and is now issued repeatedly. It is a report for the Wilson fellowship in Aberdeen University.

An interesting description of Seistan is given in the *Geographical Journal* for September, by Col. Sir H. McMahon, the head of the commission appointed to arbitrate the boundary and water disputes between Persia and Afghanistan. From its fertile soil and abundance of water it is a second Egypt, and though now sparsely settled, nowhere else in the world, he affirms, are there so many ruins, from shapeless mounds to high imposing structures of great size. The region is remarkable from the wind which, beginning at the end of May, blows unceasingly, with a violence sometimes reaching seventy miles an hour, till the end of September. It carries with it great masses of sand, which buries towns, and also removes ancient ruins. He refers to the work of Ellsworth Huntington, the American explorer and Carnegie research assistant, as does H. W. Cadoux in his graphic account of recent changes in the course of the lower Euphrates.

In the highest circles of the Vatican consideration is being given to the suggestions that the tomb of St. Peter should be opened to ascertain if the remains of the great apostle are really there. At the last International Congress of Christian Archæology a resolution was passed in favor of reopening the tomb. All the evidence thus far educed goes to prove that St. Peter's remains really lie in their gorgeous setting in St. Peter's Cathedral. There is sufficient proof extant to satisfy all, except the most skeptical, that St. Peter was crucified under Nero, in the Circus of Nero, at the foot of the Vatican Hill, in the year 67 or thereabouts, where the magnificent edifice built in his memory now stands. He was buried near the scene of his martyrdom, and two years later, it is alleged, was laid in the very spot over which his tomb now stands, his body remaining untouched for 250 years. The Valerian persecution at that date broke out and Christians pretended to hide the venerated remains in some catacomb on the Appian Way, which are still in existence, called "Ade Catacumbas," but before long they were in their old resting place, from which, it is asserted, they have never been removed. Records in the Vatican of the sixth and seventh centuries state that the tomb of the great apostle became the center of the official cemetery of the popes, many of whose remains were found the last time St. Peter's shrine was opened. The form of the apostle's sepulchre has changed several times, but the place never; indeed both the old and the new church of St. Peter were built around the tomb, and at present it is not in the exact center of the edifice.

In the year 320 the tomb was opened that the Emperor Constantine and his mother Flavia Giulia Elena might view St. Peter's remains. They were then encased in a silver coffin, over which was large gold cross, weighing 150 pounds, the gift of the emperor and his mother. There is also supposed to be gold plate, jewels, candelabra and other valuable objects in the tomb. After this there were only two occasions in which the tomb could have been interfered with—in 896, during the invasion of the Saracens, and in 1627, during the sack of Rome by the constable of Bourbon, when the Basilica of St. Peter's was at their mercy.

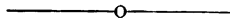
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A number of some fifty Babylonian seal-cylinders and other small stone objects acquired by the Museum of Perugia, have lately been catalogued and fully discussed by Dr. B. Teloni, who has very ably deciphered the short legends on these rocks, and has succeeded in explaining their mythological representations. Assyriologists will find this description accompanied by good photographs of twelve of the objects, in Vol. XVIII. of the *Giornale Della Società Asiatica Italiana*.

The publications of the Pali Text Society for 1906-1908 are to include the Digha, Vol. III.; the Dhammapada Commentary, the Petakopadesa, the Samanta Pasadika a recent edition of the Sutta Nipata, and the rest of the Patisanibhida. To come out this year are the commentary on the Dhammapada, the Buddhist hymn-book, edited by Mr. Norman y Benares, and the Patthana, Vol. I., edited by the Hon. Secretary, Miss Caroline Rhys Davids (Haro Grange, Ashton on Mersey Cherhill). Since its foundation, in 1882, the society has put out forty-four texts, fifty-seven volumes in all. Its publications are under the general editorship of its managing chairman, T. W. Rhys Davids. The annual payment of one guinea entitles subscribers to the two years' volume.

Another value book on Pali, nearly ready, is the text and English rendering of the Visuddhi-Magga or Purity-patti, the Magnum Opus of Buddhist doctrine and culture, written in Ceylon by the great commentator of the fifth century A. D., Buddha-ghosa of Patra. The editor, the late Henry Clarke Warren, is already known for his "Buddha in Translations" (Harvard Oriental Series, Vol. III.). The Visuddhi-Magga is to be brought out under the supervision of Professor Lanman of Harvard, who has now finished his Atharva Veda.

Christian Dan Magelsen, the Norwegian sculptor, has discovered a secret lost for two thousand years. It is a clay which presents great advantages over the material now in use, and was used by the ancient Greeks in modeling. G. Körte, director of the German Archæological Institute in Rome, claims that it is a remarkable discovery, and his opinion is endorsed by the directors of the Græco-Roman antiquity section of the British museum. It facilitates the production of hollowed objects of any form and size, and it makes possible the use of iron supports without running any risks when the iron is heated, contracts again.



American Journal of Archaeology. Vol. X., No. 3. Roman Church Mosaics of the First Nine Centuries, with Especial Regard to their Position in the Churches. Wm. W. Bishop.—On the terms Cyma Recta and Cyma Reversa. Allan Marquand.—A Greek Inscription from the Hauran. G. M. Whicher.—Notes on Dr. D. M. Robinson's Inscriptions from Sinope. A. W. Van Buren.—Examination of the Contents of a Mycenæan Vase Found in Egypt. Augustus H. Gill.—The Date of Damophon of Messene. Ida C. Thallon.—Fellowship at the School of Athens. Archæological News. Harold N. Fowler. Says Mr. Bishop: "There is a literary evidence to show that the mosaic decoration of early Christian churches probably followed, if not a set scheme,

at least a tradition as to subjects and their placing in the church. It is intended in this paper to classify the existing mosaics of Rome and the immediate vicinity, with a view to discovering what light the actual remains throw on the existence and history of this supposed traditional arrangement."

In the course of the excavation carried on by the Orient-Gesellschaft at Abusir in lower Egypt during the years 1902-6 there was brought to light a small cemetery belonging in all probability to the fourth century B. C. Dr. Carl Watzinger has recently issued a monograph of 96 pages, with three colored plates, and 135 illustrations in the text, giving an account of this cemetery and its contents. He gives a resume of the evidence for the continued production of printed vases in Attica down to the time of Alexander: there is a description, with excellent illustrations, of an open work Greek shop; there hints regarding the development, and ornament, and considerable space is devoted to burial customs as exemplified in this cemetery. Considerable space is given to the chest-like coffin of wood found on this site and in southern Russia. On this last subject Dr. Watzinger has made an important contribution to knowledge.

Excavations now in progress at Munsingen, in the Canton Berne, Switzerland, has produced results throwing valuable light on pre-historic Switzerland, and showing the country to be enjoying a very considerable degree of civilization six or seven centuries before the Christian era. What seems to have been a large necropolis has been laid bare, and up to the present 153 graves have been reached, every one of which has yielded material to throw light upon the life of the period. Among the most interesting is the grave of a child, evidently of a rich family. There are bracelets on the arms and feet and around the neck a necklace of bronze, while near lay fifty reddish amber and blue glass beads that had evidently formed another necklace. There was also a prettily ornamented vase, which had apparently been the child's toy. A skeleton of a soldier showed the man to have been of that squat, thick-set type still common in the country.

At the Paris Academy of Fine Arts, Commandant Esperandien, director of excavations at Alesia, announced that recent finds had enabled the workers there to reconstruct a hut which had been inhabited by ancient Gauls. These houses were neither of stone nor of thatch, but of terra-cotta. The Gauls had made this by placing a two centimetre layer of brick clay on a network body and baking it in a double fire inside and outside simultaneously. Commandant Esperandien said that it was probable that

the exterior of the hut was additionally protected by thatch. Among the sculptures recovered are statues of Gallic chief and a cavalier, and also bas-reliefs picturing heads. The Academy has also received the announcement of the discovery at Sousse, in Tunis, by Lieut. Mollier, who is excavating in the catacombs of an entirely new group of galleries which he explored and found in an excellent state of preservation.

The report of the Superintendent of the Archæological Survey of India, Northern Circle, contains an interesting account of the important excavations carried out on the principal Buddhist site near Kasia, between January and March last. The excavations have, in the opinion of Mr. Vogel, the superintendent, established beyond a doubt the identity of the site near Kasia with the traditional place of Buddhist's Nirvana, one of the four great places of Buddhist pilgrimage. There is still a large amount of excavation work to be done before the extent of the site is fully disclosed, and Mr. Vogel urges that this work should be steadily and consistently carried out to the end, and not abandoned before completion, as the exploration work at Sarnath has been. It will probably take two or three years to complete the work. The buildings appear to have extended in all directions beyond the limits of the mound, but the exact extent of the site can be established, owing to the discovery of a brick wall which once formed the enclosure. This wall has been traced through the fields, and its length is not less than 5,000 feet.

Part 5 of the first volume of Dr. H. Winckler's "*Ex Oriente Lux*" contains a dissertation by Carl Niebuhr on the methods of historical criticism applied to the new discoveries illustrating the history of the ancient East. The statements in this pamphlet will no doubt cause considerable criticism. Nevertheless a perusal of Mr. Niebuhr's assertions may prove useful to many Oriental scholars, and to those especially who would lay the chief stress of their research on the mere philological investigations of the cuneiform inscriptions and similar documents.

The Macmillan Company has recently issued "Old Babylonian Temple Records," by Robert J. Lau, Ph.D. The material for this volume was derived from the collection of Babylonian tablets in the possession of Columbia University, New York. The first part gives the contents of two hundred and fifty-eight tablets, dating from the later dynasty of Ur (2700-2580 B. C.). The second part contains a full catalogue of all the inscriptions in the collection, while the third part is a sign list and glossary, and the fourth part consists of plates reproducing sixty-one tablets.

In a recent number of the *Berliner Philologische Wochemschrift*, Herr Pomtow criticises in detail the work of the French excavators at Delphi. In particular he makes two serious charges:

(1) No competent architect watches the excavations, no satisfactory record seems to have been made of the places in which architectural fragments were found, and the building stones have been moved from the places in which they were uncovered, so freely that an architect now finds his inferences with regard to them difficult and uncertain; (2) the publication of the result of the excavations is delayed, while many of the remains of antiquity which were uncovered and exposed to change, if not destruction, and the verification by other schools of the statements of the excavators become each year more difficult. The remains of the Temple of Athena Pronœa, which had been hidden for centuries, were destroyed a couple of years ago, before the excavators had published their account of the ruins, by a great rock rolling down from a foothill of Mt. Parnassus. Dorpfeld is wise in leaving part of the site of ancient Troy to be uncovered by later generations, who may have better methods and higher standards than the archæologists of to-day.

The discovery in 1888 of the famous cuneiform correspondence in El-Amarna, in Egypt, containing official communications that passed about the year 1500 B. C., between foreign kings and governors and the Egyptian King, surprised many scholars. Among these letters were some from a king of Arsapi, the exact location could not be settled. Now Prof. Hugo Winckler of the University of Berlin, has found in Boghaz-Koi, in Asia Minor, east of the Halys, a large number of Babylonian and Assyrian cuneiform inscriptions. The place had hitherto been famous for its unique rock-sculptures; but these finds show that it was the center of the Hittite State of Arsapi. The tablets written in Babylonian are in the Chatti dialect and date from the time of Rameses II, and Chetasar, who, according to a covenant carved in the temple of Karnak, had made an alliance with each other. The work of excavating at Boghaz-Koi is to be vigorously pushed.

During last winter, the excavation of the large monastery in the northwest portion of the mound at Kasia was continued, but nothing very striking was discovered, except a collection of inscribed clay seals. These, however, according to their inscriptions, belonging to the "congregation of reverend friars of the Convent of the Great Decease," a term constantly used in Buddhist sacred books to indicate Buddhist's Parinirvana. There were also two inscriptions mentioning another monastery, viz., the convent of Buddha's cremation, which is known to have existed

in the immediate neighborhood of Kusinara. Hieun Tsiang's description of the temple of Nirvana as standing in a grove of tall trees on the water's bank in a river, half a mile northwest of the town of Kusinara, also supports the evidence of identity now discovered at Kasia. Two other monasteries were unearthed last winter, and in one of them an important collection of metal vessels and sacrificial implements were discovered. This monastery was destroyed by fire A. D. 400. Judging by what has already been discovered, the further exploration of the site promises to disclose matters of great archæological interest, and the complete investigation desired by Mr. Vogel should certainly be sanctioned.

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The American Journal of Semitic Languages and Literature, October, Oriental Exploration fund of the University of Chicago. First Preliminary Report of the Egyptian Exploration Portions of first Esdras and Nehemiah in the Syro-Hexaplar Version, C. C. Torrey—Historical Scarab Seals from the Art Institute Collection, Chicago, G. C. Pier.

Auf Alexanders des Grossen Pfaden. Eine Reise Durch Kleinasien. Von A. Janke. This little book of 186 pages, gives an account of the journey in 1892 of Captain Janke, with lieutenants to the ancient battlefields of the Granicus river, now known as Bigha Tschai. The attempt was made to work out from the ancient accounts of Alexander's battles with the Persians, and from the studies of the topography, the site of the battlefields, the disposition of the contending forces, and the routes followed through the country. He gives important reasons for this belief that he has fixed the position of the battlefields of Issus and the Granicus; and, in addition to his researches in the path of Alexander, he explored, as far as possible, the valley of the Kœ-kun-Su River, and followed a new route through the steppe between Eregli and Konia to the north of the route that appears on the Kiepert map. There are twenty illustrations from photographs, and six plans. The price is seven marks.

The last half volume of the *Journal of the American Oriental Society* contains the translations, by Dr. L. H. Gray, of a Sanskrit drama (hitherto unpublished), and among other special papers a timely one embodying the recent decree of the Chinese Emperor, a translation of these in full being given by Dr. J. C. Ferguson. The vexed question of temple libraries in Babylon receives fresh treatment at the hands of Prof. Morris Jasrow, and Prof. D. G. Lyon contributes a treatise on the origin of the Hammurabi code.

In the August *Expository Times*, Professor A. H. Sayce has an article entitled "The Archæology of Genesis XIV." The results of this archæological analysis, Professor Sayce sums up as follows:

1. Cuneiform documents of Khammu-rabi sage lie behind the Hebrew text.

2. Documents were Babylonian. This, however, does not preclude their having been written in Canaan, since the official titles of the years were sent by the home government to the Canaanite as to the other governors. One of these notices, announcing the official title of one of the years in the reign of Samsu-luna, the son and successor of Khammu-rabi, has been found in the Lebanon, and is now in the American College at Beirut.

3. The Hebrew text is a translation, or paraphrase, of a cuneiform original. This is proved by the spelling of Amraphel, Ham, and Zuzim, and the reading of Uru-Salim, by Salem; possibly also by the last syllable of Amraphel and the first syllable of Eschol. A paraphrase is less likely than a free translation, since all those who received a Babylonian education were accustomed to translating, more or less literally, from Sumerian. The Canaanite or Hebrew glasses found in the Tel el-Amarna tablets, also point to translation in the proper sense of the word.

4. The whole chapter belongs to the same period of history and literature.

5. The narrative from beginning to end is historical, and is probably ultimately based on official annals.

6. The Babylonian proper names have been handed down with remarkable correctness, indicating (a) that the same care was taken in Canaan in copying older documents as in Babylonia and Assyria; (b), that the Hebrew translation was conscientious; (c), that the Hebrew text is on the whole to be treated.

7. The spelling of the name of Amraphel is not official Babylonian, that of Chedor-Laomer agrees with the curious spelling of the Spartali tablets.

8. The difference between the Septuagint and the Masoretic texts—the Septuagint readings being usually preferable to the Masoretic on archæological grounds—show that there has been "corruption" of the Hebrew text since it was first definitely fixed.

9. We are therefore justified in believing that still greater differences would be discoverable could we get back to any earlier text, such as it was before the Pentateuch had been reduced to its present form by "Ezra and the men of the great Synagogue," who could have done for it what Pisistratus is said to have done

for Homer ; O. 2 Es. 19-21-22. In this particular chapter, however, the differences, according to (6) would not have been material.

10. The Hebrew translation was made after the conquest of Laish by the Danites in the lifetime of the grandson of Moses, but before Hazezontamar had become En-gendi.

11. As the use of the so-called Phœnician alphabet in Palestine cannot be traced archæologically beyond the age of David or Samuel, the Hebrew translation of the cuneiform original may have been made then. Von Hummelauer has pointed out that Deut. 12: 12-16 represents "the (*not* a) book of the kingdom" (Sam. 10: 25) written by Samuel (Bardenhewer's *Biblische Studien*, VI. 1, 2). That the official records of Israel perished in the destruction of Shiloh by the Philistines (Jer. 7:12; 26:6), is shown by the loss of the names of the high priests between Phinehas and Eli, the list in Ch. 6: 4-15, 50-53 being taken from the genealogy of Ezra (Ezra 7: 1-5), combined with some other genealogy. With the regime under Samuel, we may therefore conjecture that the new alphabet, and probably also the use of the native language were introduced among the Israelites, as they seem to have been at Tyre under Abibal and Hiram I. Samuel himself bears a name of the Khammu-rabi period, Samu-ilu.



"The Source of the Blue Nile. A Record of a Journey through the Soudan to Lake Tsana in western Abyssinia, and of the Return to Egypt, by the Valley of the Atbara, with a Note on the Religion, Customs, etc., of Abyssinia," is the rather long title of an interesting book by Arthur J. Hayes. It is, however, especially to the anthropological notes throughout the volume, and the exceedingly valuable notes on the religion, customs, etc., of Abyssinia, that we would call attention. It will surprise many to learn that some hundreds of thousands of Jews did not follow Moses across the Red Sea, but went west, down the Blue Nile, to found a kingdom of their own, which they called Saba. These were the original Abyssinians. A manuscript, giving details of all this, was appropriated by the English at the capture of Magdala, but this, after reaching the British Museum, was stupidly returned to Emperor John. The original of this manuscript had remained 1,700 years in an island of Lake Zouai, whose inhabitants are still of the present Jewish type, although they were christianized at a very early date. The ecclesiastical art of Abyssinia is used for devotional purposes. The notes on nuns, clergy, sacred writings, fasts, marriage contracts, and exorcists, are extremely interesting. (London: Smith, Elder & Co., 800 pp. XI. 315. Price, 10s. 6d.)

THE OLD TESTAMENT AND EGYPTIAN MONUMENTS.

By Prof. Flinders Petrie—From the Expository Times.

The first paper presented to the Church Congress this year was read by Professor Flinders Petrie. It came under the general title of "The Bible and the Evidence of the Inscriptions." But Professor Flinders Petrie is an Egyptologist. So he confined himself strictly to Egypt. He was able in a short paper to mention all the references to the Old Testament which have yet been found upon the Egyptian monuments.

The points of contact are few. But every year adds to their number. And they are sometimes very significant. Last year under the high priest Onias iv., they went down into Egypt to under the high priest Onias IV., they went down into Egypt to escape the persecutions of Antiochus Epiphanes. The place is Tell el-Yehudiyeh; it is twenty miles north of Cairo.

The site was discovered, and the foundations of the temple were discovered also. The temple in Egypt had been just half the size of Solomon's temple in Jerusalem, a span for a cubit being the measurement throughout. No doubt it was built after the pattern of the temple of Zerubabel, which almost must have been half the size of Solomon's temple. And to make the likeness as close as possible, the mound on which the temple in Egypt stood was constructed on the model of the Temple Hill in Jerusalem.

From the temple of Onias, Professor Petrie passes to the Jewish colony in Egypt in the days of Jeremiah. For his method is to begin at the latest events, and work back to the earliest.

"O ye remnant of Judah, Go not into Egypt." Thus came the word of the Lord by the mouth of Jeremiah. But they went down into Egypt, and took Jeremiah with them. "So they came into the land of Egypt; for they obeyed not the voice of the Lord: thus came they even to Tahpanhes." Tahpanhes is the modern Defenneh, thirty miles south of Port Said. And there is "Pharaoh's house" still, and the "pavement which is before the entry," where Jeremiah buried the stones, and prophesied that Nebuchadnezzar would set up his throne upon them, and spread his royal pavilion over them (Jer. 43:10).

When we reach the period of the Kings we come upon a difficult historical question. It is the date of the campaign of Tirhaka against Sennacherib (II. Kings 19:9). The only occasion upon which this campaign could have taken place was, according to the annals of Assyria, in the year 701, 2, 3. For in that year Sennacherib made his one and only expedition to these parts. But the reign of Tirhaka did not commence till 691 or 693 B. C. How could he have gone out against Sennacherib in 701? Professor Flinders Petrie answers: "We now know that

Tirhaka was acting in the Delta, probably as regent of the Ethiopian king, for nine years before his own sole reign in 693 B. C." And he thinks it quite natural that he should be called king by the Jews, to whom he was the sole representative of the Ethiopian kingdom.

A similar difficulty about So or Sua is similarly proved. In II Kings 17-4 So is called king of Egypt. This was in the year 725 B. C. But Shabaka (whom Professor Petrie identifies with the Biblical So) did not begin to reign till 715 B. C. But is Shabaka or So called on the Assyrian monuments? Professor Petrie believes that he is called Sibe. Now it is recorded that as early as 720 B. C. Sargon attacked Sibe, who was then tartan or commander-in-chief in Musri, that is, in Egypt, and Professor Petrie concludes that So was acting as viceroy for the distant Ethiopian king before his own sole reign began.

It will be observed, Professor Flinders Petrie not only identifies the So of II. Kings 17-4 with the Sibe of the Assyrians, which all others scholars do, and with the Shabaka of the Egyptians, which some scholars think impossible, but he also identifies Musri with Mizriam, the ordinary Hebrew name for Egypt, which a few scholars very decidedly do not. He knows that they do not. "A desperate effort," he says, 'has been made to separate the Musri of Sibe from Mizriam or Egypt, and to prove that another kingdom of the same name joined the eastern frontier of Egypt.' But he holds that one fact has not been taken in account—the fact that Egypt politically included Sinai then as now. And he adds that there is not a single occurrence of the name Musri which is not applicable to the political limits of the kingdom of Egypt.

After mentioning Zerah of II. Chronicles 14: 9-15, whom he identifies with Osorkon I., Professor Petrie passes to Shishak, II. Kings 15: 25, and for once forgets his good resolution. "The riot of negation," he says, "which has tried to amend the name of Shishak into an entirely different form (the reference is no doubt to Professor Cheyne's suggestion that Shishak is a corruption of Cush) in order to disconnect it from the campaign of Sheshank, only shows how rabidly unhistorical criticism may become."

Professor Petrie cannot tell us who was the anonymous Pharaoh whose daughter was married to Solomon. The dates would suggest that he was the last, or the last but one, of the Twenty-first Dynasty of Tanis. "These kings had little or no political power, and securing a retreat into Palestine would be a great advantage for them in case of trouble with the rival dynasty of Thebes."

Then Professor Petrie comes to the period of the Judges.

He calls it the "dark period of the Judges." It was dark for Israel, and it is dark for the modern historian. Its one clear and cardinal fact is that throughout the whole period there is no reference to conquest or intrusion from Egypt. That means that the long series of Egyptian conquests and raids, which extended from 1580 to 1186 B. C. (the sixteenth year of Ramessu III.), had come to an end, and before the Israelites entered Canaan. Put the entry into Canaan at 1175 B. C. Then the Exodus must have taken place after 1215 B. C. For it took place during the strong reign of Rameses III. It must, then, have fallen in the reign of Merenptah (1234-1214 B. C.), or perhaps more likely in the disorganization of the kingdom under his four weak successors (1214-1203 B. C.).

But about the Judges. Professor Flinders Petrie is convinced that in the Book of Judges there are three separate narratives of three contemporaneous events or series of events. One series of events belongs to the North, another to the East, and the third to the West. On adding the periods for the events of each division he finds 118 years for the North, 122 years for the East, and 121 years for the West—practically identical times. Now from the beginning of the reign of Rehoboam in 937 B. C., we have Solomon 977, David 1017, and Saul beginning about 1030 B. C. That places the beginning of the judgeships about 1150 B. C., and leaves 25 years, more or less, for the slow conquest of Canaan under Joshua.

And that is all clear and convincing. It is true that the narrative in the Bible does not separate the events in the time of the Judges into three contemporary strata, but seems rather to make them succeed one another in unbroken line. And Professor Flinders Petrie is most reluctant to depart from that. But then the Exodus would be thrown so far forward that the Israelites would be in Canaan while the Egyptians were still sending their expeditions there. Whereupon we should have to ask how they were allowed to leave Egypt while the Egyptian king was so powerful, and how there is no reference whatever to an expedition or interference from Egypt while Joshua and the Judges were accomplishing their work.

When Professor Petrie reaches the Exodus his survey is practically over. But in approaching the narrative of the Exodus he has one serious difficulty to deal with. It is the question of the number of the Israelites who left Egypt under Moses and journeyed through the Wilderness.

EDITORIAL.

THE DISTRIBUTION OF EDGED TOOLS.

We have already spoken of the axe as the most common of all the edged tools. It is interesting to notice that the stone axe was very widely distributed, but in every locality had about the same appearance and characteristics. This is



DOUBLE AND SINGLE GROVED STONE AXES.

illustrated by the Plate, for we can hardly tell the difference between the stone axe of the Cliff-Dwellers and those of the Mound-Builders.

It will be noticed that the stone axe, wherever found, was a very awkward tool, as compared with the steel axe of the present time, for its edge was liable to become blunt from use. The handle was generally made from a branch of a tree, and was straight and only held by a wythe, which was held to the axe by cords. The handle was likely to become loose, and the result was, that axes are found with double grooves, which was another manner of making the handle firm. A few axes have been found with square blades and grooves which extend from the blade to the butt, both above and below the axe. In this groove a wedge could be driven, so that the handle could be held firmer. The main difference between the axes consisted in their size and weight, and in their shape. Axes have been found which weighed fifteen and even twenty pounds. Other axes are so small as to be apparently of no use, except as a plaything, and yet they have the same shape as the large axes.



STONE AXE.

The stone axe was, of course, more useful in a wooded country, than on the plains; but like the axe of the present

time, was useful everywhere. There was scarcely a fire to be made without the use of the axe to cut the wood. There was never a tent stake to be driven, without using the butt-end of the axe as a maul. There was not a tent to be raised without the use of the axe in cutting the poles. In making so-called "long houses" the axe was necessary to split the posts and make a frame from them, and then fill the sides with bark, which had been peeled off from the logs. Even in the region where stone was used for making houses, the axe was as common as in the timber region. The houses in the arid regions of the West were built by the aid of the axe, as well as other tools; many of which have been gathered into the museums. The houses of the Cliff-Dwellers were also built by the aid of the axe. On the Northwest coast there are houses of timber whose sides are made of plank, and the roof of what might be called shakes. The ends and sides were held by a frame and posts, with planks inside of the frame. The families were



CELTS WITH AND WITHOUT HANDLE.

divided from one another by partitions. In front of the houses were what are called the totem poles. Inside were boxes with carved lids; all of which were made with edged tools, among which was the axe.

□ Grooved stone axes have been described by Dr. A. C. Yarrow,* and depicted in plates, along with spear-heads, arrow-heads and knives.

Grooved stone axes from New Mexico and Arizona are associated with long arrow-heads and spear-heads. Some of the axes are designed for double wyths, very much as they are among the Mound-Builders.

V. The most interesting of all the axes are those which are common in Wisconsin. They are all long and tapering in shape, have ridges raised above the axe for the handle, the butt is hemispherical, the blade is adorned by long straight

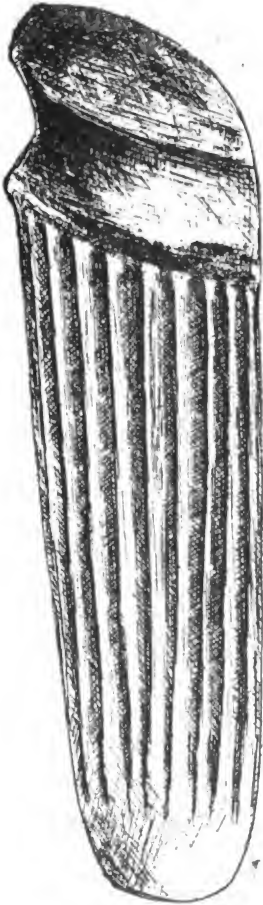
* See Thirteenth Annual Report of Bureau of Ethnology; also, U. S. Geographical Survey, Vol. VII.

ridges, with creases between them; the blade also has a graceful curve and is generally quite sharp. No axe in the world is more symmetrical, and yet it was made by a people who remain unknown, though it is supposed that they were the same people who erected the effigies, which were so common in this state. It would seem that the same taste and skill which was exercised in raising the earth into imitative shapes which the effigies present, had also been exercised in the stone axe.

The pottery of Wisconsin was not superior to that which prevailed elsewhere, but the axes are remarkably well made.

The double-bladed axe is found in many places. This was convenient, because if one blade became dull, the other could be used. There are many cases where the axe became an ornament and a symbol which had a religious significance resembling that given to the trowel among the Masonic fraternity. Evidence of this is furnished in the article on the "Precious Metals."

VI. The gouge is another implement which was common in America during prehistoric times. It was similar in its shape to the ordinary celt, but with the difference that one side of the blade was concave, leaving the edge in the form of a crescent. The gouge was especially useful in making or digging out wooden troughs for holding sap in which the maple sugar was made, and in digging out the interior of the wooden canoes. There are pictures which represent a primitive man with a skin of an animal hanging to his shoulders, standing beside a canoe partly finished. The interior of the canoe is dug out by the use of fire and the gouge; the fire reduced the wood to a char and the gouge removed the burnt material, but with the axe the



FLUTED AXE.

bow and stern, as well as the sides, were brought into their proper shape. There is no tool more useful in making canoes than the gouge, but the axe was next to it. There are canoes on the Northwest coast even at the present time, which are very graceful in their shape, and are easily propelled. They are raised at the bow and stern, so as to cut the waves in front

and prevent the water from overwhelming the canoe from behind.

The axe, the gouge, the chisel, and the celt are generally associated closely together. These tools are very common in the large collections. They are usually found with spear-heads, and arrow-heads, all of which might be classed with edged tools.

VII. The chisel or celt should be classed with edged tools. These are generally named after an implement found in Europe in prehistoric times. They derived their name from the Celt. It is used as a chisel, rather than an axe. It resembles a tool which was common in New Zealand, with which the Maoris accomplished their wood carvings. There is no more useful tool in the world than the celt. It generally has a rounded blade, which is ground to a sharp edge. It gradually slopes or tapers to a point which forms the other end or butt. The celt is sometimes thin, and is polished throughout. It is, however, at times merely chipped on the sides and the blade end ground. Hematite celts were common in Ohio and the Mississippi Valley.

VIII. Chipped spades may be classed with the edged tools. These are very common in the state of Ohio. Many of them are left in the rough, with the blade ground to a sharp edge. There is another form of the same tool, which might be called a hoe, for it is much shorter than the spade and is notched at the other end and is fastened to a long handle by wyths, and was used as a hoe. A modification of the hoe, or spade, is represented in the cut on the following page. Such implements were very common in the rich valley of the Ohio and Mississippi.

There are other blades resembling these, which have been found in the quarries at Piny Branch on the Potomac. They have also been described by Mr. Holmes.* Many of them are rejects, and are very rough in shape. A large number of implements resembling chisels have been found near Baltimore, Maryland; they are generally chipped to an edge, and are seldom ground.



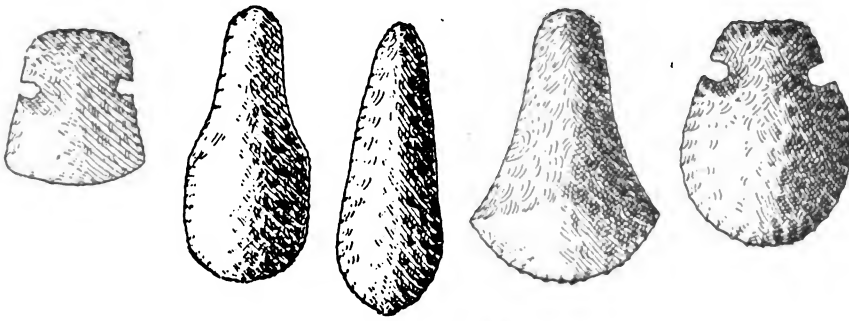
STONE GOUGE

* See Fifteenth Annual Report of Bureau of Ethnology, page 14 to 152

Mr. Thos. Wilson has described the flint gravers, flint points and drills, and flint knives which were used by the Cave-Dwellers of France. He has described the large spear-heads which were found in Arkansas, some of which were leaf-shaped, and were nearly fifteen inches long. Others in Illinois, Ohio and the Mississippi Valley. All of them were finely wrought.

Mr. Thruston has described the chisel-shaped celts, and the large flint implements which were common in Tennessee; these are leaf-shaped and fan shaped. Some of them are used for spades, others for knives, and others for daggers. Mr. Thruston speaks of the flint ceremonials, which resemble long knives, but had projections at the end resembling wings.

Obsidian, copper and flint objects abound in upper Missouri. These have been described by Mr. S. P. Brower. Some of them are very rude, and others are finely wrought. Grooved axes, large agricultural implements, arrow-heads, long slender celts, tomahawks, leaf-shaped implements, and lances are



SPADES AND HOES FROM THE MISSISSIPPI VALLEY.

described by Mr. Brower as existing on the upper Missouri River valley in Kansas, Nebraska and Iowa.

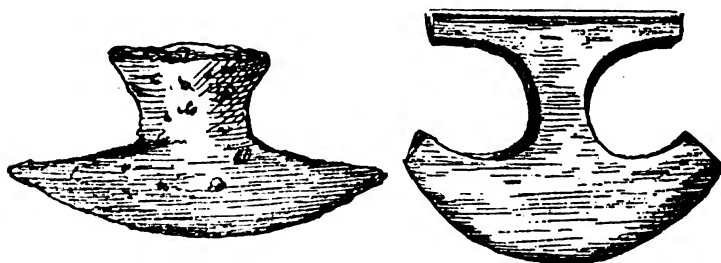
Two very beautiful spades, or agricultural implements, are depicted in Mr. Moorehead's book on "Prehistoric Implements." One very beautiful and symmetrical flint leaf-shaped cutting knife, was discovered in Union County, Illinois, now owned by Dr. Whetlby of St. Louis. It is fawn colored with brown spots and is twenty inches long. Spades with a broad blade and narrow top; flint hoes with broad blades and the top notched, in which the handle could be fastened, fluted spear-heads are found in Kentucky and the Southern States. Flint flakes in the form of knives have been found in Mexico.

Edged tools were not always made of stone, for shells were often used, both as knives and as cutting implements. This was true, especially of the Gulf tribes. Mr. Thomas Wilson has described these, also Mr. W. H. Holmes. They were in the form of scrapers, celts, knives, and sometimes axes. The manner of hafting a shell axe, was by placing the handle

across the shell and boring a hole through it, and then lashing the two together with thongs or cords.*

Catlin speaks of the Indians of Vancouver's Island as having mussel shells, sharpened at the end and set in wood, bound by a wythe, forming a sort of adze. The Indians of New England made their canoes of pine trees, which they burned hollow, scraping them smooth with shells, and shaping their outside with stone hatchets. The Eskimos used edged tools in the form of chopping knives, but they also had tools in the shape of gouges and scrapers, which were set in wooden handles. Stone axes from the Little Colorado are described by Mr. Walter Fewkes, they are associated with the pottery which is abundant there.

IX. Knives are to be mentioned among the edged tools. Perhaps the best knives, or at least the longest and best shaped, are those which abound in California. Dr. C. C. Abbott has described them. Some of them are made of obsidian and are pointed at each end. Mr. Powers gives a figure of several



CIRCULAR KNIVES FROM PERU.

weapons of war from California, some of which are fifteen inches long and two and one-half inches wide.

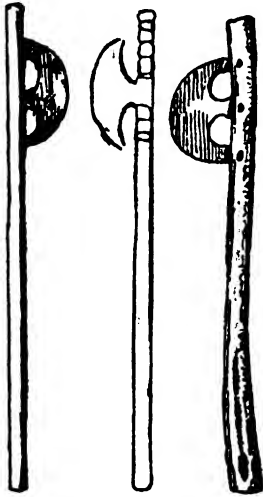
Knives inserted in handles are found in California. They were obtained by Mr. J. W. Powell from the Piute Indians. These knives with handles differ from the flint knives, in that the blade is very short and stubbed, while the flint knives are long and tapering. These long knives abound among the Stone Graves, as well as in California, and resemble them in every respect. There is no class of flint implements more interesting than these long knives. All writers on stone relics speak of them.

The distribution of these flint knives is almost equal to that of the axe, but not equal to that of the spears. Remarkable skill was used in chipping them, so as to bring them to an edge on both sides. It required much patience and a trained eye. The only objection to the long knives, is that they were liable to break in the hands. They could be used as spears or

* See "Art in Shell," by W. H. Holmes, Report Bureau of Ethnology, page 206.

daggers, but are to be classed among edged tools. They were so highly prized that they were worn about the person and were carried at their dances. There was also a religious significance to them. One of the winged figures which are represented on the shell gorgets as fighting, has a long flint knife in his hand, and is thrusting it into his foe. One of the winged figures has, also, a peculiar knife which is in the shape of a hook. It would seem that it was intended to tear the flesh, rather than to pierce the body. This furnishes an explanation of the use of the flint hooks, which are common among the Stone Graves.

In Southern California, flint hooks were found, which were probably used as spear-heads. Delicate splinters made of flint were used for lancets or knives for bleeding. These are treasured up in cabinets and are highly prized for their shape. They can hardly be called tools, unless we take into account that the natives practised surgery with as much skill as the whites, and they used the delicate flint knives and flint points for their lancets. The Aztecs made razors from obsidian flakes.



AXES WITH RIVETS.

The use of axes and edged tools was not confined to this continent, for the discoveries made in the Lake-Dwellings of Europe show that they were common in prehistoric times there. Edged tools in the shape of axes and celts were also common in Egypt and Babylonia at the opening of history, and the fact that they were used as emblems and ensigns of honor proves that they had long been in use. The celt, the hammer, the axe, the adze,

and all weapons were more or less modeled upon the ancestral stone patterns. This was the case not only in America in pre-historic times, but in Africa, Europe and Asia.

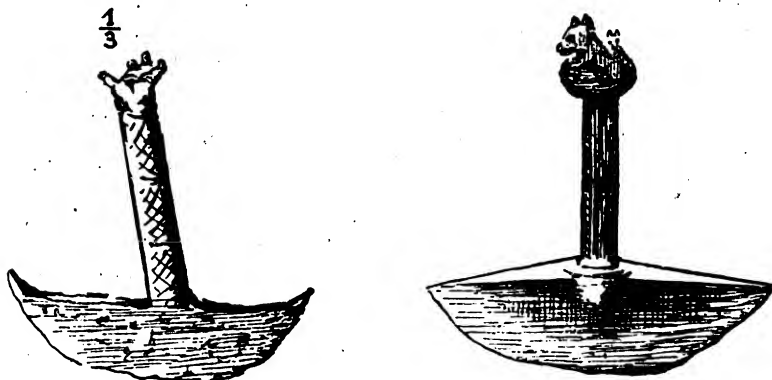
X. The semi-lunar metal axes form another interesting class of edged tools.

Mr. Valentini says that the axe, the adze, and the celt were often modelled on the ancestral stone pattern, but a pliant metal like bronze afforded the workman a treatment which stone had not allowed; the edge received a semi-lunar shape, the two horns projecting, thus resisting the strain of the stroke. The great advantage of this kind of an axe or celt was that it could easily be taken out of wood in which it was driven. It will be understood that an axe, chisel, or wedge, which is driven into the wood, might be difficult to draw out, but if the edge is flanged, it answers the purpose of a wedge, or

of a straight bladed axe: but if it became fastened in the wood it could be moved to and fro and could be easily drawn out.

If the progress made in comfort and art during the Bronze Age is to be judged by nothing else than by the implements, they alone would suffice to give us an insight into an enormous revolution which was accomplished. One begins to realize what the ancient poets meant when singing of Prometheus, who became a smelter, a molder, a smith, a caster, and a sculptor.

The battle axe which is described as being in the possession of the powerful Montezuma and was sent by Cortez to the Pope,



CIRCULAR BLADE KNIVES FROM PERU.

was really an index of the state of civilization which was reached in prehistoric times by the Mexicans. This alone shows that the Bronze Age had been reached by this people, perhaps by their own unaided efforts. It also becomes an index to the civilization which prevailed in the Bronze Age elsewhere. Fans, feather wreaths, robes, and hair dresses were in use by the chieftans of Peru, as well as elsewhere. The feather work, the knives and axes were signs of the luxury the cruelty which prevailed both in Mexico and Peru.

EDITORIAL NOTES.

COPPER AND PRECIOUS METALS MENTIONED IN THE BIBLE.
We have in this number given a general resumé of what is known about the precious metals and their distribution in the two continents of America. There is a broader view to be taken of the subject than that which is given, and one which carries us back to a much earlier time. This is shown not only by reading the Old Testament, but by examining the testimony of those who lived before the Flood. Chas. W. P. Jarvis, F. G. S., of the Victoria Institute has written an article which illustrates this point. He says copper and iron are the only two metals which are recorded before the Flood. The Hebrew word for bronze does not occur in the Old Testament, though Tubal Cain was an artificer in brass and iron. These were the metals which enabled Noah to build the ark. Without these two metals the ark could not have been built. When the Children of Israel spoiled the Midianites they were commanded that the brass, iron, tin and lead shall be made to go through the fire and be made clean. The reason for this was that these metals had been used in connection with idolatry and bore the stamp of that religion, very much as the copper figure with the wings of birds did in America, as well as the gold images which were found in Peru. Art at a very early date was tinged with the idolatry and religions which prevailed, and the symbols have been perpetuated in this country, the same as in the Old World in the time of Moses. In the taking of Jericho, Joshua commanded that all the silver and gold, brass and iron be consecrated to the Lord. "They shall come into the treasury of the Lord." In the building of the Temple by Solomon, Hiram, the king of Tyre, sent an artificer who was acquainted with the metal work and textile fabrics. His name was also Hiram. Solomon made a bronze scaffold, five cubits high, and had it set in the middle of the court, and upon it he stood and kneeled before the congregation of Israel. Hezekiah removed the high places, cut down the groves, broke into pieces the serpent which Moses had made: and before his death Moses said, "God bringeth thee into a good land, whose stones are iron, and out of whose hills thou mayest dig brass."

Before starting for Babylon, at the end of the captivity, Ezra separated twelve priests to whom he weighed the silver and gold of the house of God, and two vessels of fine copper as precious as gold. The Lord spake unto Job in the whirlwind saying, "Behold Behemoth, which I made with thee, his loins are as strong pieces of brass, his bone like strong pieces

of iron; canst thou fill his skin with pieces of barbed iron, his head with fish spears; the sword of him that layeth at him canst hold. The spear, the dart, the hiberghion." In Ezekiel it is said, "The house of Israel has to me become dross; all they are brass and tin. As they gather brass and tin into the furnace to melt it, so will I gather you in my anger and fury."

Pagan nations employed their precious metals as idols, but the Jews were commanded on leaving Egypt: "Thou shalt not make with me gods of silver; neither shall he make unto you gods of gold." The metal lead is only alluded to five times, and tin nine times; but gold and silver, and brass and iron are often mentioned: gold about six hundred times, and brass and iron about one hundred times in the Old Testament.

THE ORIGIN OF THE INDIANS is involved in great obscurity. The opinion of the ethnologists is divided according to the locality which they are studying. Those who are studying the Indians of the Northwest, are very likely to trace the kinship of the Indians to the Asiatic tribes. Those who are studying the tribes of the Southwest, are more likely to trace resemblances to the people who dwelt in India, or the Islands of the Sea. Those who study the tribes of the Gulf of Mexico, are likely to trace the resemblance to the former tribes of the West Indies and to the Basques of Spain. Those who are studying the tribes of the Northeast, especially those on the Hudson Bay, trace their origin to the ancient Britons, or to the ancient Cave-Dwellers of Europe. The study of relics does not, however, essentially help one in solving the problem. There are relics which resemble the paleolithics of Europe, but they are not found in the same horizon. The study of the caves of North America does not bring out many analogies, though Professor Ameghino thinks that he finds in the Cave-Dwellers of South America close resemblance to those of the south of Europe. There are workshops of flints which present lances similar to the javelins, lances and spear-heads of Europe, but these are as likely to be found in the prairies of the far West, as in the mounds of the Mississippi Valley, and far more likely in the regions north of the Great Lakes. The question arises about the copper relics of the Northwest coast: Were they borrowed from the Northeast coast of Asia?

THE GOLDEN FLEECE. It has been ascertained that in Caucasia and Armenia there was a gold producing region, and that the torrents swept along with them gold, which was gathered by the natives by means of hurdles or flumes. From this circumstance the fable arose in reference to the "Golden Fleece."

JAPANESE ART. Mr. Dennan W. Ross has bestowed upon the Boston Museum of Art a series of Japanese prints, 1,800 in number, and a large number of paintings from Japanese, Chinese and Thibetan artists; also a number of Japanese

swords, and bronze vessels, and pieces of carved woodwork. The collection consists of 2,100 pieces.

THE TEMPLES OF PERU. The roof of the temples was formed by timber work of precious woods plated with gold, but was covered outside with a simple thatch of straw. The two contrasted with one another very strongly. The doors of the temples opened to the east. At the other end, above the altar, was the golden disk of the sun, placed so as to reflect the first rays of the morning sun. The mummies of the departed Incas, supposed to be children of the sun, were arranged in a semi-circle around the sacred disk on golden thrones, so that the rays of the sun came day by day to shine upon their remains.

THE *Pacific Commercial Advertiser*, published at Honolulu, commemorates its fiftieth anniversary by a special number, devoted to an account of the past and present of the Island. Its first issue was July 1, 1856, which is reproduced in facsimile.

THE PIGMY FORESTS lie westward of the Mountains of the Moon in a wild region. The religion of the pigmies was a belief in spirits and in charms; that a serpent watches over the encampment of the dead. They mark their faces with red and black streaks. They carry wicker baskets of provisions, and have bows and arrows. The arrows have two iron prongs tipped with deadly poison.

AN INDIAN STATUE ON THE MOUNTAIN TRAIL is the title of a life like statue of an Indian following a mountain trail.

MOUNT MCKINLEY, the highest summit of North America, is to be explored under the auspices of the Philadelphia Geographical Society.

GLACIATION AMONG THE ANDES. The increase of glaciation is due, according to Dr. Rudolph Hanthal, to extra terrestrial causes.

SHALER AND RUSSELL, two noted scientific men have passed away within a few months. Prof. N. S. Shaler was born in 1841, was educated at the Scientific School of Harvard University, and connected with that institution the greater part of his life. His published works are well known. Prof. Israel C. Russell was born in 1852, was educated at the School of Mines connected with the New York University. He was connected with the United States Survey for a number of years, and has been a professor at Ann Arbor since 1892.

BOOK REVIEWS.

SAMUEL J. MILLS, MISSIONARY, PATHFINDER, PIONEER AND PROMOTER. By Thos. C. Richards, Boston. The Pilgrim Press, Chicago and New York; 1906.

The Haystack gathering which has just been held in Massachusetts, near Williams College, makes this book a timely one and will add interests to its contents. Mr. Mills was the prime mover in the little band that started the foreign missionary work. The haystack comes into the foreground because it furnished a retreat to the band from a storm, which had come up suddenly, and at the same time was the place where the young men consecrated themselves to the missionary work.

Samuel J. Mills came of Dutch stock, but was born in 1743 in Bloomfield, Conn. He graduated from Yale in 1764, and became a missionary in Vermont. He lived amid the hills of Loring Ford. His conversion was in answer to the prayer of his mother, and was a remarkable one. A revival of religion occurred in Williams College, [some of the students were accustomed to meet in a thick grove of maples, their conversation turned on missionaries and the young men consecrated themselves to the work. This was the beginning of foreign missions, though Mr. Mills himself never went. The American Board was established and five young persons were appointed and ordained at Salem. The picture of the ordination is given in the book. Mr. Mills was not among them. He became a home missionary in the West. He went on horseback to Marietta, Ohio, and other places. At Natchez, with 1,500 inhabitants, he found no organized church, from Natchez he went to New Orleans on a flat-boat. This was about the time of the Louisiana purchase. A report was made and published in the Massachusetts Historical Society collection. It contained a description of the Cherokees, Chickasaws and Choctaws, and six weeks spent among the Creeks.

A second home missionary journey was made in 1814-15, when he visited Pittsburgh, Cincinnati, Vincennes, Shawneetown, Kaskaskia, St. Louis, and reached New Orleans the day before the British captured the fort on Mobile Bay. He was accompanied by Generals Adair and Thomas, in visiting the soldiers who were gathered there. This was after the war of 1812. The report of the tour was published. The Board of Home Missions was established in 1816. It sought to unite all the different denominations, which were then represented by their missionaries in this region.

During his trip through the Southern states, he was impressed with the needs of the Africans and began work for the

colored men. Along with Professor Burgess of the University of Vermont, he started on a mission to Africa. The vessel was wrecked in the English channel. Mr. Mills held audiences with the Duke of Gloucester, and met Wilberforce. He left England in 1815 and reached the river Gambia. For five weeks the two men kept hard at work. On the return journey from this mission for the colonization of Africa, he was taken sick and died on shipboard, and was buried in the ocean, at the age of 72 years.

He was never a foreign missionary, but accomplished a great work, both for home mission and foreign mission, and was a pioneer in them all.

ANCIENT RECORDS OF EGYPT. Historical Document from the Earliest Times to the Persian Conquests. Edited and Translated with Commentary by James Henry Breasted, Ph. D., Professor of Egyptology and Oriental History in the University of Chicago. University of Chicago Press; 1906. Price net, \$3.75; post paid, \$3.95. Price per set of four volumes, \$15 net; \$15.80 post paid.

Comparatively speaking, very little of the rich and productive civilization which flourished for at least five millenniums before Christ, on the banks of the Lower Nile, has survived in written documents for our enlightenment. We may make one exception: the religious literature has survived in a mass of temple inscriptions and papyri from the predynastic age.

The king kept a series of annals. Of such annals, only two have survived; the Palermo Stone and the annals of the Wars, recorded on the walls of the Karnak Temple. That we possess any documents at all from the Old Kingdom, 2980 B. C., is chiefly due to the massive masonry tombs of that age. By the aggressiveness of the Pharaohs, their enterprises found record on the rocks outside of Egypt, on the peninsula of Sinai, 3400 B. C. and 2580 B. C.; in the alabaster quarries, near Amarna, 2160-2000 B. C.; on the rocks of the first cataract, on the stelæ at Abydos, in the Middle Kingdom, 2160-2178 B. C.; papyrus documents, 1580-1150 B. C.; the temple records and inscriptions, state documents, 1350-1205 B. C.; tombs, chapels and the "Amarna" letters. The great mass of documents are found in Upper Egypt. The inscriptions are oftentimes mutilated.

The author of this book has examined all of these, and visited the more important sites and took squeezes and photographs. He had access to the extensive collations made for the Berlin Egyptian Dictionary. The translation in these volumes are based upon all the available material. The translation itself, begins with the chronology. The Egyptians, a

far back as 4000 B. C. had discovered the length of the year, and divided it into twelve months of thirty days each.

There were three different years—the Calendar, the Sothic and the Solar. The history of the calendar can be traced for some two thousand years. It existed before the Old Kingdom 4241 B. C. This carries back the date apparently earlier than that of the Babylonians. Even earlier than the old date of creation. Two hundred years covers the obscure period, including the Hyksos. The dates with the Twelfth Dynasty are astronomically computed. Back of 2160 B. C. the chronology of Egyptian history becomes unstable.

The Palermo Stone reveals a great and powerful kingdom from the beginning of the dynasties, the oldest of Egypt. The annals begin with the pre-dynastic king, before the union of the north and the south. The Palermo Stone was inscribed on both sides with a series of royal annals, from the accession of Menes. The events of the year were, for the most part, celebrations of religious feasts.

The Sinai Inscriptions begin with the reign of Unefru, who was the great founder of the Egyptian mining in the copper region of Sinai. A relief represents the king with upraised war club about to smite a Bedwi, symbolized victory over the Bedwi of the region. This is an important fact, that copper mines were worked as early as this in Sinai. In reference to the Sphinx and the so-called Temple: a sunken panel occupying the greater part of the stela represents the statues of gods.

The large mastababs of the Old Kingdom contained long inscriptions. The legal organization of this remote age is revealed, as the kings give whole towns endowments to keep the tombs of the deceased.

The sixth dynasty becomes known by inscriptions. Among them are the inscriptions of an unknown builder. The master pyramid builder accompanied an expedition for securing hard and costly stone for the Pyramid and Temple of Sakara. The chief architect's inscription has been read. The Sinai Inscription is important. It dates far earlier than the days of Moses, and shows that much progress had been made before the building of the pyramids. Pepi I. organized an army and marched into Southern Palestine, which was the first Egyptian invasion known to history. The army returned safely. Expeditions were made to the quarries.

A nobleman of Elephantine was intrusted with a commission by Pepi II. to the North Red Sea. He led an expedition to the North Sea to rescue the body of a nobleman who had been killed while building a ship for the voyage. He was slain by the "Asiatics." Inscriptions of Sebni are very important for religious, geographical and historical data.

The ninth and tenth dynasties introduced an obscure epoch. There was a conflict with the South at this time.

UNIVERSITY OF CALIFORNIA PUBLICATIONS: AMERICAN ARCHÆ-
 OLOGY AND ETHNOLOGY. Contribution to the Physical
 Anthropology of California, Based on Collections in the
 Anthropology of the University of California and in the
 United States National Museum. By Alex. Hrdlicka.

This contribution by Alex. Hrdlicka on "Physical Anthro-
 pology" is strictly scientific. It is based mainly upon measure-
 ment of forty-seven skulls. The general results are as inter-
 esting as unexpected: the skulls are of one physical type of
 people. This shows that though the Californians had differ-
 ent languages and other ethnological differences, they may
 have sprung from the same original people. Along the
 eastern border are the Paiutes. The Mission Indians in the
 south have the same physical type as the Mohawks. Arizona
 and Sonora show no population, recent or ancient, allied to
 the Californians, but a large group to the south, including the
 Aztecs, the Tarahumari and Chihuahuas, are related to the
 Othomi as well as to the Californians. This throws some light
 on the subject of migration.

THE ETHNOLOGICAL SURVEY OF THE PHILIPPINE ISLANDS. Pub-
 lished at Manila.

The Ethnologic Survey of the Philippine Islands is doing
 an excellent work, as this pamphlet of 258 pages shows. The
 natives have been thoroughly studied, their physical traits
 have been examined, and their mode of life is described. It
 appears that their houses, their weapons, their tools, their do-
 mestic utensils, their basketry, their shields and pipes, their
 bamboo tubes, and their garments are all very different from
 those found on either the Asiatic or American continent. The
 physical features of the natives of Luzon, and in the Philippines
 generally, are different from those of either continent, but are,
 after all, so varied that the tribes differ from one another about
 as much as if they had lived in different lands. Agriculture
 is the main employment. On the mountain terraces, the raising
 of rice by irrigation is very common. The Malayan stock
 seemed to have followed this method of agriculture. The
 threshing of rice was by a peculiar process: the rice was
 thrown into a large vessel, and then stirred by the women,
 who held long poles in their hands. Head hunting has been
 a common practice among the Igorrotes.

POOLE, ON THE ORIGIN OF MAN. Published by the Methodist
 Book Concern: Cincinnati, Ohio.

Those who accept the Bible as a divine revelation contend,
 that the Mosaic Story of Creation is the correct one. The
 religionist regard Moses as the medium through which God

revealed the method of creation, man is in no sense a special creation. The naturalist has one method of explaining the creation of man, the religionist another. There seems to be an unreconcilable difference between them. It is possible that if the two classes would exchange standpoints, there would be an advantage to both, for the spiritual is as much a reality as the material, and the divine insight might be an aid to those who depend upon the material instruments for penetrating the secrets of creation. The telescope on one side and the microscope on the other may be helps, but the eye of faith is better than either, if one would understand the unseen.

ANTIQUITIES OF THE JEMEZ PLATEAU, NEW MEXICO. By Edgar L. Hewitt. Government Printing Office: Washington, D. C.; 1906.

The book contains fifty-four pages, fourteen plates and one map. This booklet shows the location of the greater number of the antiquities of the Great Plateau. They are situated on the national forest reserve, on Indian reservations and on unappropriated land. They embrace the "Cavate Dwellings," the Pueblos, Ruins of the Payarito Plateau of the Jemez Valley, and the Chama Drainage. The ground plan of the pueblos are given, and the relics are described. The plates show the entrances to the "Cliff Dwellings," to the "Cavate Dwellings," to the "Painted Caves," to the "Shrines," "Reservoirs," and the stone relics, types of pottery and ceremonial objects. An archæological map of the Jemez Plateau shows the Pueblos and Shrines.

It is a valuable little bulletin, which bears the endorsement of W. H. Holmes of the Bureau.

TRAVELS IN BOLIVIA AND PERU. By Baron Nordenskjöld.

From this work we learn that various tribes living in primeval forests of Rio Janeiro, are still in the Stone Age, almost entirely unaffected by civilization.

BOOKS RECEIVED.

The Philippine Experiences of an American Teacher. A Narrative of Work and Travel. By William B. Freer.

Ethnographic Notes in Southern India. By E. Thurston; 1906.

Comparative Religion: Its Genesis and Growth. By Louis Henry Jordan, D. D., late special lecturer in Comparative Religions at the University of Chicago. With an Introduction by Principal Frairbairn, D. D., LL. D., D. Lit.

THE CLIFF-DWELLERS AND PUEBLOS.

BY

STEPHEN DENISON PEET, PH. D.

Editor of the American Antiquarian. Author of "The Mound-Builders, Their Works and Relics," "Animal Effigies and Emblematic Monuments," "Aboriginal Religions," and other works.

400 Pages, Finely Illustrated.

This book treats of that mysterious people called the Cliff-Dwellers, as allied to the Pueblos, who are supposed to be their survivors. It begins with the description of the Great Plateau and its varied scenery, the Grand Canyon of the Colorado coming in as a very important part. The author has quoted descriptions from the geological reports, which are very graphic, and has made the geographical features prominent. The "age" of the Cliff-Dwellers is also spoken of, and their distinctive peculiarities are brought out. Two or three chapters are given to an account of their discovery: First, by the Spaniards; next, by the early American explorers, and later on by the various expeditions which entered the region.

The descriptions of the Cliff-Houses are very graphic and are illustrated by many plates and small cuts, which present to the eye, the wonderful architecture and the strange situation of these Cliff-Dwellings.

A chapter is given to an account of the distribution of the Cliff-Villages, and another to the traditional history. This is followed by the description of the various architectural structures, such as the towers, estufas or temples, cliff-houses, store-rooms, balconies, courts, and various apartments. A comparison is drawn between the Cliff-Dwellings and the different kinds of Pueblos which are still standing—some of them in ruins.

A chapter is given to the Cliff-Dwellers' relics; others to their social and domestic life; to their agricultural habits; to the contrivances for irrigating; while the final chapter shows the contrast between the Cliff-Dwellers and the Wild Tribes, which at present occupy the region.

The book covers the whole field, and describes nearly all of the structures that have been discovered, including those in Sonora, in the northern part of Mexico. The customs of the present Pueblo Tribes are also described, especially the Snake Dance, which has become so celebrated, and several cuts are given in illustration. No other book has ever been published which is so comprehensive. It is likely to be the standard work for many years to come.

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BY STEPHEN D. PEET, PH. D.

Editor of "The American Antiquarian and Oriental Journal."

A SECOND EDITION of this book, containing **FIVE** NEW CHAPTERS and a large amount of additional material, has just been published. It brings the subject up to the present date and throws much light upon the Mound-Builder problem.

Many large pyramid mounds of the Gulf States are depicted in the Work, also the relics which have recently been discovered are shown by the cuts furnished.

There are certain problems still unsolved, but these are discussed in a candid manner. The question of the age of certain copper relics, and the character of the symbolism which prevailed, is also presented. The book treats of the whole Mound-Builders' Territory, and brings before us the different stages of art and the different modes of life which prevailed in prehistoric times.

The author holds that there was a contact between the Southern Mound-Builders and the so-called civilized races of the Southwest, and that trade was carried on with all parts of the continent, but he thinks there was a decided difference between the hunter tribes and those which constructed the great earthworks which are scattered along the Ohio River and in the Gulf States.

The book contains about 300 illustrations, which represent the earthworks and relics very correctly.

It is an interesting book, and one that will be valued for the information it contains.

—++—
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PRESS NOTICES.

The Outlook says:

Dr. Peet has given us a volume of rare interest, with over seventy-two full-page illustrations, and over two hundred others. All lands are here brought into view, but proportionately the largest space is given to our own continent, both North and South. While the volume is mainly descriptive, the theories of the chief authorities as to the origin and order of development are stated and discussed, and the questions still open for future settlement are recognized. The splendid ruins in Central America are elaborately described, but the secret of their origin is still undiscovered.

Education says:

Dr. Peet is a learned antiquarian, and in his book shows profound study and research. He traces the growth of architecture in pre-historic times as shown by the remains of ruined cities in Asia and America, the former supposed to have been built five thousand years before Christ; the latter about five centuries before the Christian era. A chapter gives the best results of scholarship in reference to the first home of the human race in the valley of the Tigris, the origin of the arch and of the column, the development of the pyramid, the palace, the temple, the house, boats, roads, bridges, and a thousand other interesting things. There is a fascination about these pages even for the lay reader, while the professional antiquarian will find the book an authority.

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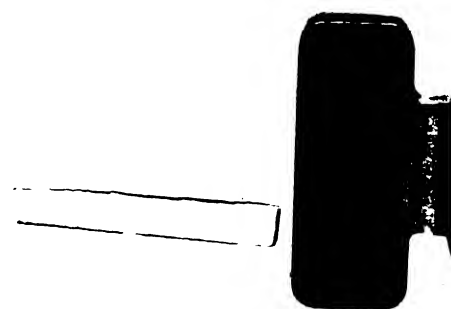
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